

Full Length Research Paper

Using student group leaders to motivate students in co-operative learning methods in crowded classrooms

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This study examines the effects of employing student group leaders on the motivation of group members during co-operative learning activities in a secondary school classroom in Turkey. The study was carried out in a period of eight weeks in biology classes during which “living things” and “ecology” topics were taught to a class of 45 students (Year 9, 14 to 15 years old) by using Jigsaw and STAD (Student Teams Achievement Divisions). Students were divided into groups of four and a student in each group was assigned as the group leader. Data were collected through interviews with group leaders and group members and through video recordings of one group continuously for eight weeks. The study revealed that student group leaders’ influenced the motivation of the group members in different ways. These were called reward, relationship, role-model, emotion and learning- oriented motivational strategies.

Key words: Cooperative learning, student group leaders, active learning, secondary science

INTRODUCTION

Co-operative learning in the classroom environment has become an important way of practising constructivist educational approaches that attribute importance to discovery learning and construe learning as a social activity (De Lisi and Golbeck, 1999; Sharan, 2010). Constructivist approaches are based on the assumption that learning involves active construction by the learner, having as a source the learner’s own experience, with the teacher playing a facilitatory role, providing appropriate situations, tasks, and conditions (Glaserfeld, 1995; Wood et al., 1995; Driver, 1995). In Turkey, however, these changes have only recently begun to attract attention from educational researchers (Karaoglu, 1998; Altinparmak, 2001) and a movement from teacher-centred learning to student-centred learning does not seem easy to achieve (Ekiz, 2001). The review of literature related to the Turkish context (Cakici, 2001; Ekiz, 2001; Cakicioglu and Cakicioglu, 2003) revealed

that this difficulty is because:

- (1) There is a lack of collaboration between the tertiary education faculties and secondary school teachers. This prevents teachers from learning new learning methods.
- (2) Tertiary education faculties do not attribute sufficient attention to the teaching of different teaching methods when training student teachers.
- (3) Teachers are more occupied with the heavy burden of the curriculum, living little time for trying different teaching methods.
- (4) Classrooms in Turkey are too crowded to practise co-operative learning.
- (5) There are physical difficulties in terms of resources (example, the presence of desks instead of tables) to practise co-operative learning methods.

As is evident from these factors, the causes behind the difficulties of employing student-centred teaching in Turkey are varied. The first two reasons are related to the lack of co-operation between tertiary education faculties and schools, and the under-emphasis of teaching student teachers different teaching methods. The last three reasons are related to problems surrounding secondary

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education in general. This study has used the context of a Turkish Biology classroom to explore a particular approach to co-operative learning. This approach involves student group leaders during group activities and investigates the student group leaders' influence during the group activities. This is an ideal situation because students and teachers have not experienced this approach before and thus it would be possible to explore the ways in which roles develop. The study is based on the proposition that employment of student group leaders in co-operative group activities can support teachers in the use of co-operative learning methods in their classrooms.

The need for student group leaders

Co-operative learning methods have been a fruitful area of theory, research, and practice (Ashman and Gillies, 1997; Johnson et al., 2000; Kagan, 1992; Lord, 1998; Sharan, 1990). A vast amount of research has been carried out across numerous subjects to search for the effectiveness of these methods (Ghaith and Bouzeineddine, 2003; Hanze and Berger, 2007; Krol et al., 2004), and areas (Gillies, 2000; Johnson and Johnson, 1990; Miller and Harrington, 1990; Watson et al., 1994), which culminated in the development of a number of new co-operative learning methods (STAD, TAI, Jigsaw, Learning Together, Group investigation and others).

Co-operative learning refers to a set of instructional methods in which students work in small, mixed ability learning teams to maximise their learning (Johnson and Johnson, 1994, 1999). The main aim is to create a learning environment in which student achievement and cognitive skills can develop (Watson, 1991). In co-operative learning, groups as well as individuals are rewarded for their achievements. Thus peer norms support rather than oppose achievement (Slavin, 1984). Social skills such as leadership are important if a successful outcome is expected from co-operative learning groups (Johnson and Johnson, 1995).

One way of providing students with the opportunity to develop leadership skills is the appointment of group leaders during group activities (Keller, 1999; Schneider et al., 1999, 2002). However, the role of group leaders in co-operative learning activities and development of this role as the group develops seems to be neglected in the literature (Karnes, 1990). Despite the importance of the contribution group leaders could potentially bring into the group activities, there seems to have been little attention paid to the role of group leaders in co-operative learning groups apart from some simple managerial roles (Hogan, 1999), such as encourager, praiser, recorder and material monitor (Kagan, 1992) that aimed at enhancing student contribution during the group activities. Aronson et al. (1978) saw the role of group leader as being almost

as important as the role of the teacher in co-operative learning activities when he suggested that;

“The role of the group leader is patterned after the teacher's role; they are both “facilitators,” a term we use for persons whose function is to lead a group, help the members look at how they are working together, and examine how they can improve their interaction in order to accomplish some task (p. 49).”

In the same vein, Grobman (1999) argues that selecting group leaders from students enables us to see inside the world of groups and Hogan (1999) suggests group leaders can have a profound influence on whether other group members are included in or alienated from participating in important conceptual tasks, procedures and decisions.

Student leaders in the literature

Yamaguchi (2001) carried out a study to explore the importance of the group context in the emergence of leadership, dominance, and group effectiveness in children's co-operative learning groups. She carried out her study with 30 elementary and secondary students. In her study she compared the effectiveness of mastery condition to performance condition. Using achievement goal orientation as a framework, she asked six groups to perform the task under a mastery condition and four groups to perform under a performance condition. Mastery condition referred to the environment that favoured learning and improving and performance condition referred to the environment that favoured competition and social comparison. She found that under the performance condition, group members exhibited more dominance and negative behaviour, while displaying more leadership and positive behaviour under the mastery condition. She also found that the learning aspect of the mastery condition played an important role in the emergence of leadership, dominance, and group effectiveness.

Schneider et al. (1999) carried out an investigation to predict, understand and test the durability of leadership behaviour. They focused on five different domains of student leadership: personality, interest, motivation, behaviour, self-rated skills and academic ability. All five of these domains were measured by tests that were developed by different researchers. Students' motivation to lead, for example, was measured by using the Miner Sentence Completion Scale, which measures a person's generalised motivation to lead or manage.

Following up on this study the group carried out another study in 2002 (Schneider et al., 2002), to find whether personal attributes that are used to predict adult leadership were used by students to nominate the leaders among their peers.

Table 1. Data collection methods used in the study and the frequency and duration of using them.

Group	Data collection methods and the frequency and duration of using them.				Reasons for selection of the data collection methods and its frequency.
	Interview		Video recording		
	Frequency	Duration (min)	Frequency	Duration	
1	4	45-70	0	0	(i) Interviews enabled the researcher to learn the perceptions of the students about the issues related to leadership of student group leaders and the practice of co-operative learning methods. (ii) The frequency of interviews was based on the availability of the groups for interviews. (iii) The use of video for group nine only was due to the technical impossibility of recording many groups at the same time, the need to record student behaviour continuously and the physical position of group nine.
2	3	45-70	0	0	
3	2	45-70	0	0	
4	4	45-70	0	0	
5	4	45-70	0	0	
6	3	45-70	0	0	
7	2	45-70	0	0	
8	2	45-70	0	0	
9	3	45-70	6	80 min	

Approaches for the motivation of the group members.

There are also some studies that focus on leadership among gifted primary and secondary school students (Chauvin and Karnes, 1983; Karnes and Bean, 1990; Keller, 1999).

This study explores the effects of employing student group leaders on the motivation of the group members during co-operative learning activities in a secondary classroom. Motivation is defined as “the reason or reasons one has for acting or behaving in a particular way” (the new Oxford Dictionary of English, 1998). This definition, however, lacks willingness which is needed for it to be applied to the classroom context (Covington, 1992). As Brophy (1998), rightly suggests motivation includes students’ willingness to engage in lessons and learning activities as well as their reasons for doing so.

MATERIALS AND METHODS

Instruments

Interviews with students and student group leaders, and video recordings of one group were employed as the data collection methods.

Interviews were conducted in the form of group discussions, as the students knew each other, to investigate the influence of the student group leaders on the group members and group activities during co-operative learning group work (Table 1).

The first round of interviews was conducted on Saturday with the consent of the parents. The second, third and fourth rounds were carried out in the Guidance and Counseling room of the school every week during PE and Music classes. Students in the same groups were interviewed together. By interviewing students and student group leaders at different intervals during the study period, their perceptions of the development of practice were captured. Video recordings were used to record one of the groups during the eight weeks of the study. Video recordings provided the researcher with the following three benefits:

(1) Video recordings accumulated aspects of interaction such as talking, gesture, and eye gaze that are not easy to capture through

other methods.

(2) It allowed the researcher to observe the same event repeatedly.
(3) It yielded analytical benefits because it granted access to the inspection of the antecedents and consequences of the critical events (Roshelle, 2000).

Participants

Participants of the study were from a general state school in Diyarbakir, a city in the southeast of Turkey. The school, at the time of the study had a population of 625 students. It accepts students from Year 9 to Year 11 with different backgrounds from its catchment area. The selection of the class was done through consultation with the teacher and the willingness of the students to be participants. The participants were 45 students from Year 9 (age 14 to 15) biology class within the school.

The students and group leaders were trained in a two-hour session through role play and practising working in groups prior to the study and throughout the study as roles developed.

Co-operative learning methods used in the study

STAD (Student Teams Achievement Divisions) and Jigsaw were used as the co-operative learning methods. This selection was based on the nature of the topics to be studied for the co-operative learning methods, and the appropriateness of the STAD and Jigsaw for beginners of co-operative learning.

STAD has five major components:

1. Class presentation: It involves the initial introduction of the topic by the teacher.
2. Teams: A team usually composes of a group of four or five students that present a cross-section of the class in terms of academic performance, sex, and race or ethnicity. The aim of the team is to ensure all team members’ learning and high performance on the quizzes.
3. Quizzes: After one or two periods of teacher presentation and one or two periods of team practice, the students take individual quizzes. During the quizzes students are not allowed to help each other.
4. Individual improvement score: It allows each student to attain a

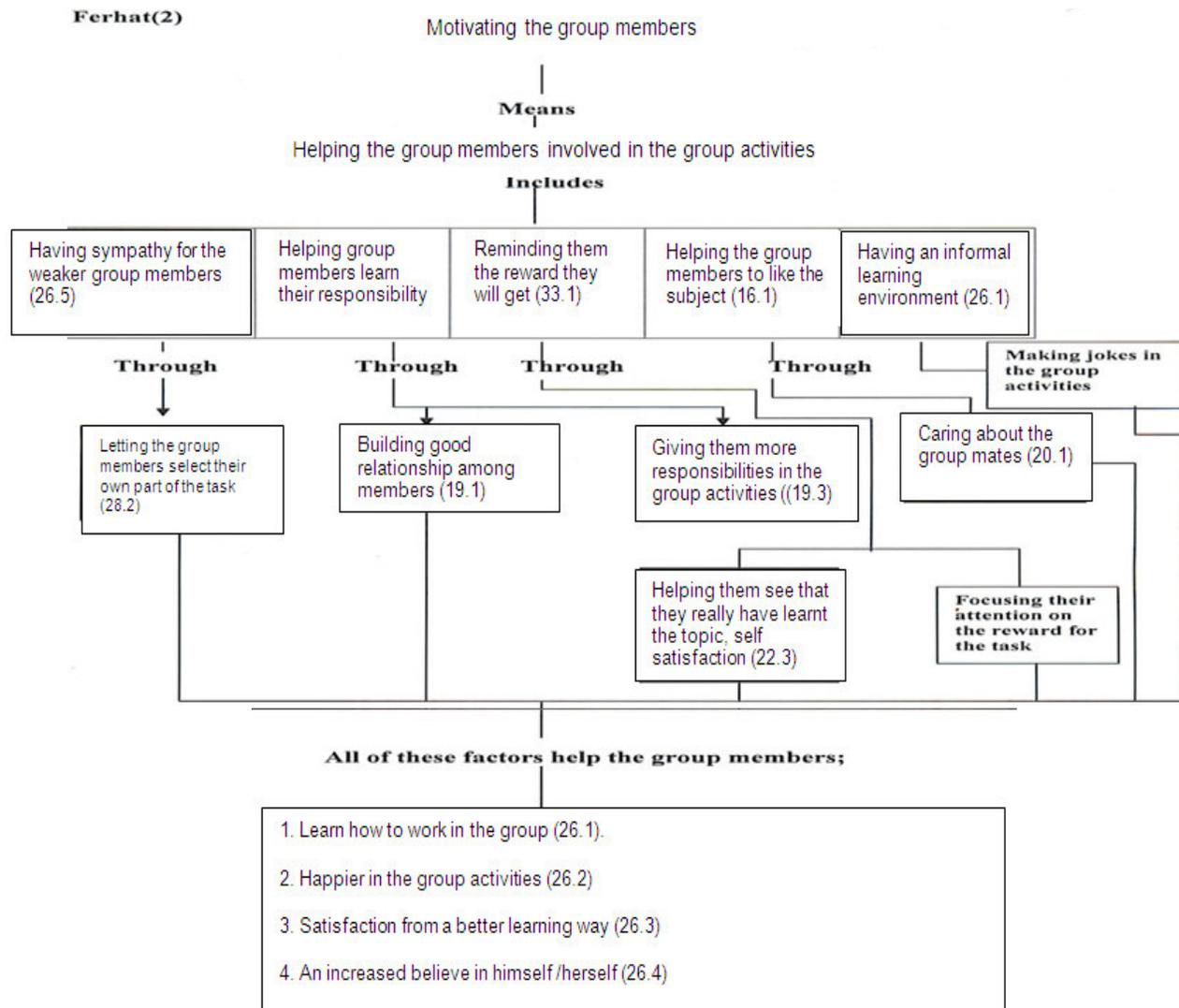


Figure 1. An example of a student group leader's cognitive map.

performance goal if he or she works harder. Each student is given a "base" score, derived from the student's average past performance on similar quizzes. According to the improvement the student make on this base score he or she contributes to the team score.

5. Team recognition: Teams may earn rewards if their average scores exceed a certain criterion.

Jigsaw also includes five steps:

1. Groups (home groups) are formed: Groups are formed exactly as in STAD.
2. Assignments of students to expert groups: The curriculum is divided into four and each student on a team is assigned one part. Students with the same part are called expert groups.
3. Expert groups: (students with the same parts) meet to learn their parts.
4. Home groups reconvene and the experts make their presentations: Each student present his or her part in home group. The group members discuss the topic and ensure that all members learn the whole topic. The group prepares their presentation.
5. Whole class presentation by groups: Groups present their work

to the whole class.

Data analysis

Similar to most of qualitative studies drawing meanings from the data gathered was a long and tiring process. The method of data analysis was inspired by Cognitive maps, it involves a map displaying the subjects' representation of concepts about a particular domain and showing relationship among them, and "conceptually clustered" matrix, includes rows and columns arranged together to bring items related to each other, as suggested by Miles and Huberman (1994). Cognitive maps were created for each group leader's behaviour and strategy that was employed by the group leader during group activities. What motivation meant to a particular group leader, the ways he/ she used to motivate the group members, the reason these ways were used were searched. Transcripts of the interviews with each group were coded and mapped (Figure 1) to make a clear meaning for individual student group leader's strategy.

From these maps different categories of motivational strategies

Table 2. Motivational strategies used by the student group leaders and the main characteristics of these strategies.

Motivational strategy	Main characteristics
Reward oriented	<ol style="list-style-type: none"> 1. Reminding the group members the reward they will get. 2. Rewards as evidence of their work in the class. 3. Rewards as their superiority over the other groups.
Relationship oriented	<ol style="list-style-type: none"> 1. Preventing students from thinking that the leader has a power over them. 2. Treating the group members equally. 3. Creating a close relationship among the group members. 4. Making them compete with the other group members. 5. Making them that they will be belittled before the other groups in the event of failing. 6. Reminding the consequences of the disruptive behaviour. 7. Reminding the group members that they should do better than the other groups.
Role model oriented	<ol style="list-style-type: none"> 1. Presenting him/her as hard worker for the group. 2. Trying to earn respect of the group members.
Emotion oriented	<ol style="list-style-type: none"> 1. Helping the individual group member understand how important s/he is for the group. 2. Creating a group spirit among the group members. 3. Giving the group members the feeling that the other group members will help if anything goes wrong. 4. Increasing members' self- belief.
Learning oriented	<ol style="list-style-type: none"> 1. Helping group members learn their responsibilities. 2. Helping group members learn the subject. 3. Reminding the value of learning of the task for the forthcoming university entrance examination 4. Helping group members like the subject.

were derived (Table 2). In order to compare the strategies employed by the individual student group leaders these maps were incorporated into matrixes after clustering them according to their relation to each other.

Validity and reliability

The data collected was analysed in its original language (Turkish) in order to eliminate any misunderstanding during translation.

In order to increase the validity of the data, triangulation is suggested (Robson, 2002; Silverman, 2000). Triangulation refers to "the attempt to get a 'true' fix on a situation by combining different ways of looking at it or different findings" (Silverman, 2000: 177). In this study two different ways of collecting data were employed (that is, group discussions and video recordings). The combination of two sets of data provided an opportunity to confirm the findings that each set of data suggested and remedy the problems caused by one set of data.

RESULTS AND DISCUSSION

In the study, motivation included student group leaders' efforts at increasing the group members' involvement in the group activities. Motivational strategy in the study means a particular path taken by a particular student group leader to enhance students' willingness to engage in lessons and learning activities as well as their reasons for doing so.

This study showed that student group leaders used five different ways to motivate group members during group activities. These were called reward, relationship, role model, emotion, and learning oriented motivational strategies.

The reward-oriented motivational strategy

During the study, in some of the weeks, sometimes after classroom presentations by several groups, one of the groups was given some rewards such as pens, erasers etc. by the class teacher to acknowledge the group's efforts. The following conversation among the members of Group 9 shows students' interest for the rewards:

"Group leader- ... it is better first if everyone says what they see as important about bacteria.

1- Why can we not prepare some questions that we think are important about bacteria and than we can look for answers as we did last week?

GL- We wasted a lot of time preparing questions last week. I think we don't need to prepare questions ourselves. We will work on the worksheet anyway.

2- 1 Is right, if we finish early we can prepare ourselves for the presentation better.

GL- That is what I think.

4- We can do as well as any of the groups did in their presentation last week.

2- It is a pity we did not present our work well last week, we could have won the pens.

GL- It does not matter, let's concentrate on this week.

4- It would have been nice to show my father that I'd won it for my work in the class.

GL- You and 2 say what you think, we should know about the structure of bacteria and me and 1 will try to explain the importance of bacteria in our daily life (V.T. 3, 89-102)".

The dialogue among the group members provides an example of the value of the rewards for the students. For one of the group members, it is important to get a reward for their work in class because it provides evidence of their work in the classroom that they can share with their father in order to get their acknowledgement. This aspect of the nature of rewards is identified by Eccles and Wigfield (1985) as attainment value. According to this view, attainment value is to do with the students' need for achievement, power or prestige. In the example above, the force behind the motivation is to share achievement with parents in order to gain prestige with them. This study found that the group members were more likely to be motivated when they were presented with some kind of tangible rewards. Also it should be noted that the environment of working in a co-operative learning group was an incentive or reward in itself as the students were learning in new learning methods, which gave them freedom to interact with their group mates and express themselves freely. This can be counted as a tangible reward in itself for the students to work with enthusiasm during the group activities.

In the following extracts, the importance of having rewards is also vivid.

"...last week we focused our attention on the pens (for the best presentation). Obviously, the material value of a pen is not much but it shows we were successful. For example, in football, a team struggles for thirty, thirty- five weeks to become successful. They do not spend that much effort for only a piece of iron...or silver... the aim there is to get that honour. Ours is like that (Group member of Group seven)".

"...I think as students we value the existence of a reward for our work. When we prepare for the university exam, we usually prefer mock exams with rewards. I mean the ones, which offer free courses for preparation for the university exam or offer a free preparation book... (Group member of Group Six)."

The group leaders used rewards as a means to attract the group members' attention to the tasks. The rewards available for them were not totally contingent to the task success only, as the group leaders took the overall

performance of the group members into account during the group activities. The intangible rewards were the group leaders' praise for the group members and tangible rewards were mainly small stationery items, such as a pen, eraser, sharpener, and so on, which were given the successful groups sometimes after the evaluations of the performance of the groups. The question of whether tangible rewards should be used to motivate students is still subject to disagreement among the researchers in this field. While some researchers seem to be in favour of employing tangible rewards because using tangible rewards, they suggest, motivate students better and have no detrimental effect on the following intrinsic motivation (Eisenberger and Cameron, 1996). While other researchers argue that using rewards can be harmful to students' learning, as student attention is likely to be distracted from learning because the effectiveness of reward is often short-lived (Stipek, 2002), and it causes students to display superficial learning behaviours, less flexible problem-solving strategies and less creativity (Hennessey, 2000; Ryan and Deci, 2000). Thus, rewards become ends rather than means.

Relationship-oriented motivational strategy

This kind of strategy is based on the relationship between the student group leader and the group members. It produced three different types of situation where the student group leaders tried to stimulate the group members' interest in the group activities.

The first of these is the situation when the student group leaders constantly reminded the group members, particularly those who were not very keen on focusing on the task; that their attitude towards doing the task would influence the whole group, that they were dependent on each other and that everyone ought to respect each other's contribution to the task. The following extract shows the student group leader's strategy for drawing the distracted group members' attention to the task:

"...I am doing all I can do to do my duties. But sometimes some of our members do not do what they are supposed to do. For example, our friend (A) was not contributing much at the beginning. I told them it was not fair to us. Because we had to spend a lot of time doing their part as well. I think we succeed in making them aware of the need to study. Now it is much better (Group leader of Group eight)"

In the example above, the group leader involves the unwilling group member in the activity by putting pressure on him and reminding him of his responsibilities. This shows that positive interdependence, one of the important aspects that differ co-operative learning from an ordinary group work that is difficult to achieve, can in fact happen through student group leaders.

The second situation is one in which the student group

leaders made an effort to create a close relationship among the group members that led to a non-threatening learning environment, which encouraged the shy group members to participate more in the group activities. The following extract from the interview with one of the student group leaders illustrates the affect of the close relationship among the group members on the motivation of the group members;

“... when we started work together in the first week, some group members were reluctant to participate. I realised they were not answering the questions even if they knew the answer. I tend to ask them “why do not you answer the question?” and they used to say “I do not feel comfortable.”... this is because we have this habit of being afraid of giving our view in the classroom. We are afraid of getting a negative reaction from our classmates in case of making a mistake. ... I arranged group meetings outside school as well. Now after few weeks of working together, D, E, F and me... we have become close to each other. We are more comfortable with each other and everyone expresses their views easier (Group leader of Group one)”.

The group leader focused on building strong bonds and good relationships among the group members in order to enhance their interest in the group tasks. The group leader believed that the creation of strong bonds among group members would force students to pay more attention to each other and to each other's learning. This aspect is referred to as group cohesion in the literature (Evans and Dion, 1991; Chang and Bordia, 2001). Chang and Bordia (2001) report that the enhancement of group cohesion increases the performance of group members. The meta-analytical study by Mullen and Copper (1994) confirms the suggestion that by enhancing the feeling of closeness, similarity, bonding among the group members, the group is likely to perform better.

The third situation occurred when some student group leaders tried to enhance the group members' interest in the task by trying to draw them into competition with the other groups' members through explaining that they should be doing better than the other groups. The following extract is an example of the kind of behaviour that was displayed by a student group leader in order to increase their interest:

“...when we were preparing for the presentation I often reminded them that we should do better than the other groups. In this way I try to create an atmosphere where our group members focus on whether we can become the best group. Thus, everyone does what they are supposed to do better. I can see every one reserving their energy for the last two hours of the day. Because we are in competition with other groups (Group leader of

Group three)”.

Students were most lively when the groups were presenting their work to the whole class or when the groups were evaluating the results of their work. One of the main reasons for the students to be readily inclined towards competition in their practices is probably the nature of Turkish education system. There are many entry examinations that students need to take throughout the primary and secondary education, not to mention the university entry exam. During preparation for these exams many student take private courses that are based on making students familiar with tests that are offered in the exams.

Because there are limited places and many students for special secondary schools, students need to compete with each other to get a place. This has been a part of student life for decades. Growing up with this psychology, it is not surprising to see student have a ready inclination towards competition in the classroom. The effectiveness of inter-group competition is also advocated in the literature. Mulvey and Ribbens (1999), for example, carried out a study to seek the effects of inter-group competition and assigned group goals on group's efficacy, goals, productivity, and inefficiency. Their study with 35 undergraduate business students revealed that inter-group competition significantly increased group efficacy, group goals, and group productivity, while decreasing group inefficiency.

Role model oriented motivational strategy

This strategy occurred when the student group leaders tried to set him/her up as an example for the group members by working harder and trying to impress the group members. The following extract reveals how the student group leader tried to enhance the group members' interest in the task through setting themselves up as an example;

“...whenever we work on an activity that we need to share parts, I try to take the most difficult part and usually the bigger part. That is because I think I am the group leader, I have more responsibilities... when I want them to do something they do not object, they appreciate the work I do for the group (Group leader of Group one)”

The effect of the role model strategy studied by Gardner and Cleavenger (1998) and Rozell and Gendersen (2003). In both studies the researchers found that when the group leader present him/herself as a hard worker, it enhanced his or her image among group members and this, therefore, created positive feelings about group activities and group members' relationship with each other.

Emotion-oriented motivational strategy

This included giving a feeling of self assurance by helping group members understand that if anything went wrong, the group members would be ready for them, promoting a group spirit and having sympathy for weaker group members. The following example demonstrates one student group leader's efforts in helping less able group members in order to involve them in the task;

"...I usually focus on A's and B's work because they are weaker than me and C. We are usually able to do our task so I pay more attention to them. I check every week if they are ready. If not I try to either help myself or ask C to help them (Group leader of Group six)".

Some of the group members appreciated the creation of an environment where they knew they had someone to support them if something went wrong;

"...I am lucky to be in this group because you know always that there is someone who will help you, if you cannot to do something. You know you can rely on the group members. We have a good environment for co-operation (Group member of Group six)".

The creation of a group environment in which the group members relied on each other appeared to be an important aspect of working efficiently in co-operative learning groups. It contributed to the formation of interdependency among the group members through a realisation that the success or failure of a member affected the success or failure of the whole group.

Student group leaders also focused on building strong bonds and good relationships among the group members in order to enhance their interest in the group tasks. These group leaders believed that the creation of strong bonds among group members would force students to pay more attention to each other and to each other's learning. The leadership styles exhibited by the student group leader were influenced by different factors. The main factor was the co-operative learning practice that was experienced for the first time. During this experience student group leaders came to understand that promoting good relationships and maintaining strong bonds among the group members keep group members motivated for the group activities. One reason for the importance of good relationship among the group members in the group activities might be embedded in the culture in which the group leaders and the group members have grown up. This is probably the reason why student group leaders focus as much on the importance of relationships among the group members during the group activities. In Turkish culture, children learn the importance of having a good circle of friends and of caring for each other. Collective

living is still prominent in Turkish society where the social bond among family members and relatives are strong and they are often dependent on each other economically and socially. These cultural norms can be used to promote effective behaviour for learning in the classroom as the current situation indicates that teachers' practices in the classroom are in conflict with them.

Socio-emotional support includes the student group leaders' influence on the group members' actions and behaviours, which stem from social and personal problems such as disruptive behaviour and group members' timidity for participating in the group activities.

Learning-oriented motivational strategy

This involved the student group leader's efforts in helping the group members develop an interest in the subject, develop study skills, and gain a sense of responsibility for learning within the task.

In the following extract the student group leader explains the strategy that was employed to help the group members do their part of the task and ensured that the group member learnt the task:

"...When we do a worksheet if someone cannot do their part, I tell them where to look for answers. Then they go back to find the answers, come back and shares them with us. Thus, instead of telling them the answer directly, I make them find these by themselves. So, they feel they can do something, they feel useful. Therefore, when I want them to do something they would not object (Group leader of Group three)".

"...let's say we are doing a work sheet. We do it in pairs first, if we find a question that we cannot answer properly, we then ask the person who was responsible for the part the question is related to (Group leader of Group eight)".

Group leaders encouraged the group members to be responsible for their own learning. The development of an interest in learning within the task was seen as important for motivation of the group members in order to ensure that the group members' participated fully and completed the task. It seemed that once the group members enjoyed working in a co-operative learning environment and the content knowledge, their participation of the task became easier. This study and the other studies (Gomleksiz, 1993; Koymen, 1992) related to the Turkish context in terms of the teaching and learning tradition found that the secondary school students in Turkish schools are bored with existing learning styles. Traditional teaching methods fail to provide opportunities to help raise students' curiosity, enthusiasm, and enjoyment for learning (Posner and Markstein, 1994). This seemed

to be one of the main reasons that students were very receptive to co-operative learning methods. This is despite the relatively higher demands of this approach where students need to exhibit more effort to take responsibility for their own learning and at the same time offering assistance to others.

Conclusion

One student group leader adhered to only one motivational strategy. The other eight group leaders used two or more motivational strategies. The motivational strategies most used were reward-, relationship- and emotional-oriented motivational strategies. Group leaders at different situations used different strategies. For example, on the one hand the leader was using reward-oriented motivational strategy by reminding the group members the value of the reward as an evidence of their work (to show their parents); on the other hand he was reminding the group members that the group would be belittled before the other groups if they fail. Thus, he was resorting to relationship- oriented motivation.

Using co-operative learning methods in classrooms is not an easy task as it demands more time for consideration such as preparation; better organisation; student involvement; power sharing and tolerance. Employing these methods in crowded classrooms needs even more efforts, as dealing with more groups requires extra time and energy. Motivating students for active involvement in set tasks, therefore, is challenging. This study looked into the effectiveness of using student group leaders to assist classroom teachers to motivate group members. The study revealed that student group leaders can motivate group members through:

- (i) Using rewards.
- (ii) Focusing on relationship.
- (iii) Being a positive role model.
- (iv) Focusing on learning.
- (v) Providing, emotional support of group member.

It also showed that:

- (i) Teachers are not in a position to pay enough attention to all students or allocate enough time to each individual student. By contrast, well selected and respected group leaders are likely to motivate individual group members and help them better in overcoming difficulties.
- (ii) Student group leaders can create informal learning environments for their group members where students are more open to each other and express their ideas more freely.
- (iii) As group leaders uses intergroup competition to motivate group members they are likely to enhance learning as well.
- (iv) Group members feel obliged to work harder when they take the group leader as role model.

(v) With group leaders the inclusion of shy or weaker group members in the group activities is easier as it gives these students self- assurance.

REFERENCES

- Altinparmak M (2001). *Biyoloji Ogretiminde Isbirlikli Ogrenme Yonteminin Labratuara Yonelik Tutum ve Basari Uzerine Etkisi*. Unpublished Master Thesis, D.E.U., Izmir.
- Aronson E, Blaney N, Stephan C, Sikes J, Snapp M (1978). *The Jigsaw Classroom*. Beverly Hills: Sage Publications.
- Ashman AF, Gillies RM (1997). *Children's Cooperative Behavior and Interaction in Trained and Untrained Work Groups in Regular Classrooms*. *J. School Psychol.*, 35: 261-279.
- Brophy J (1998). *Motivating Students to Learn*. Boston: Mc Graw Hill.
- Cakici Y (2001). *Exploring Upper Primary Level Turkish Pupils' Understanding of Nutrition and Digestion*. Unpublished EdD Thesis, Universtiy of Nottingham, Nottingham
- Chang A, Bordia P (2001). *A Multidimensional Approach to the Group Cohesion- Group Performance Relationship*. *Small Group Res.*, 32: 379-405.
- Chauvin JC, Karnes, FA (1983). *A Leadership Profile of Secondary School Students*. *Psychological Reports*. 53: 1259-1262.
- Covington MV (1992). *Making the Grade: A Self-Worth Perspective On Motivation And School Reform*. New York: Cambridge University Press.
- De Lisi R, Golbeck SL (1999). *Implication of Piagetian Theory for Peer Learning*. In: O'Donnel AM, King A (Eds.) *Cognitive Perspectives on Peer Learning*. Mahwah, NJ: Lawrence Erlbaum, pp. 3-38.
- Driver R (1995). *Constructivist Approaches to Science Teaching*. In: Steffe LP, Gale J (Eds.) *Constructivism in Education*. Hillsdale, NJ: Lawrence Erlbaum.
- Eccles J, Wigfield A (1985). *Teacher Expectations and Student Motivation*. In: Dusek J (Eds.) *Teacher Expectancies*. Hillside, NJ: Erlbaum, pp. 185-226.
- Eisenberger R, Cameron J (1996). *Detrimental Effects of Rewards: Reality or Myth?* *Am. Psychologist*, 51: 1153-1166.
- Ekiz D (2001). *Exploring Primary School Teachers' Preactive Teaching and Practical Theories of Teaching Science: Multiple Case Studies from Turkey*. Unpublished EdD Thesis, University of Nottingham, Nottingham.
- Evans CR, Dion KL (1991). *Group Cohesion and Performance: A Meta-analysis*. *Small Group Res.*, 22: 175-186.
- Gardner WL, Cleavenger D (1998). *The Impression Management Strategies Associated with Transformational Leadership at the World-class Level*. *Manage. Commun. Q.*, 12: 3-42.
- Ghaith GM, Bouzeineddine AR (2003). *Relationship Between Reading Attitude, Achievements, and Learners' Perception of Their JIGSAW II Cooperative Learning Experience*. *Reading Pschol.*, 24: 105-121.
- Gillies RM (2000). *The Maintenance of Cooperative and Helping Behaviour in Cooperative Groups*. *British J. Educ. Psychol.*, 77: 97-111.
- Glaserfeld EV (1995). *Sensory Experience, Abstraction, and Teaching*. In: Steffe LP, Gale J (Eds.) *Constructivism in Education*. Hillsdale, NJ: Lawrence Erlbaum, pp. 369-383.
- Gomleksiz M (1993). *Kubasik Ogrenme Yontemi ile Geleneksel Yontemin Demokratik Tutumlar ve Erisiye Etkisi*. Unpublished PhD thesis, Cukurova Universitesi, Adana, Turkey.
- Grobman L (1999). *Building Bridges to Academic Discourse: The Peer Group Leader in Basic Writing Peer Response Groups*. *J. Basic Writing*, 18: 47-68.
- Hanze M, Berger R (2007). *Cooperative learning, motivational effects, and student characteristics: An experimental study comparing cooperative learning and direct instruction in 12th grade physics classes*. *Learning and Instruction*, 17:29-41.
- Hennessey B (2000). *Rewards and Creativity*. In: Sansone C, Harackiewicz J (Eds.), *Intrinsic and Extrinsic Motivation: The Search for Optimal Motivation and Performance* San Diego: Academic Press. pp. 55-77.
- Hogan K (1999). *Sociocognitive Roles in Science Group Discourse*. *Int.*

- J. Sci. Educ., 21: 855-882.
- Johnson DW, Johnson RT, Stanne MB (2000). Cooperative learning methods: A Meta-Analysis. Available: <http://www.cooplearn.org/pages/cl-methods.html>.
- Johnson DW, Johnson RT (1999). Making Cooperative Learning Work. *Theory Practice*, 38: 67-73.
- Johnson DW, Johnson RT (1995). Cooperative Learning and Nonacademic Outcomes of Schooling: The Other Side of the Report Card. In: Pedersen JE, Digby AD (eds.) *Secondary Schools and Cooperative Learning: Theories, Models, and Research*. New York, Garland Publishing, pp. 81-150.
- Johnson DW, Johnson RT (1994). *Learning Together and Alone*. Boston: Allyn and Bacon.
- Johnson DW, Johnson RT (1990). Cooperative Learning and Achievement. In S. Sharan (Ed.), *Cooperative Learning*. New York: Praeger, pp. 23-38.
- Kagan S (1992). *Cooperative Learning*. San Juan Capistrano, CA: Kagan Cooperative Learning.
- Karaoglu IB (1998). Geleneksel Ogretim Yontemleri ile Isbirlikli Ogrenmenin Ogrenci Basarisi, Hatirda Tutma ve Sinif Yonetimi Uzerine Etkileri. Unpublished PhD thesis, D.E.U., Izmir
- Karnes FA (1990). Leadership and Youth: A Commitment. In: Clark KE, Clark MB (Eds.) *Measures of Leadership*. West Orange, NJ: Leadership Library of America, pp. 563-568.
- Karnes FA, Bean SM (1990). *Developing Leadership in Gifted Youth*. Virginia: Council for Exceptional Children.
- Keller T (1999). Images of the Familiar: Individual Differences and Implicit Leadership Theories. *Leadership Q.*, 10: 589-607.
- Koymen U (1992). Comparison of Learning and Study Strategies of Traditional and Open-Learning-System Students in Turkey. *Distance Learning*, 13: 108-117.
- Krol K, Janssen J, Veenman S, Linden JVD (2004). Effects of Cooperative Learning Program on the Elaboration of Students Working in Dyads. *Educ. Res. Eval.*, 10: 205-237.
- Lord T (1998). Cooperative Learning that Really Works in Biology Teaching. *Am. Biol. Teacher*, 60: 580-588.
- Miles MB, Huberman AM (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks: Sage.
- Miller N, Harrington HJ (1990). A Situational Identity Perspective on Cultural Diversity and Teamwork in the Classroom. In: Sharan S (Eds.) *Cooperative Learning*. New York: Praeger, pp. 39-75.
- Mullen B, Copper C (1994). The Relationship between Group Cohesiveness and Performance: An Integration. *Psychological Bull.*, 115: 210-227.
- Mulvey PW, Ribbens BA (1999). The Effect of Intergroup Competition and Assigned Group Goals on Group Efficacy and Group Effectiveness. *Small Group Res.*, 30: 651-677.
- Posner HB, Markstein JA (1994). Co-operative Learning in Introductory Cell and Molecular Biology. *J. College Sci. Teach.*, 23: 231-233.
- Robson C (2002). *Real World Research*. Oxford: Blackwell.
- Rozell EJ, Gundersen DE (2003). The Effect of Leader Impression Management on Group Perceptions of Cohesion, Consensus, and Communication. *Small Group Res.*, 34: 197-222.
- Ryan R, Deci E (2000). When Rewards Compete with Nature: The Undermining of Intrinsic Motivation and Self-regulation. In: Sansone C, and Harackiewicz J (Eds.), *Intrinsic and Extrinsic Motivation: The Search for Optimal Motivation and Performance*. San Diego: Academic Press. pp. 13-54.
- Schneider B, Ehrhart KH, Ehrhart MG (2002). Understanding high school leaders II. Peer nominations of leaders and their correlates. *Leadership Q.*, 13: 275-299.
- Schneider B, Paul MC, White SS, Holcombe KM (1999). Understanding High School Student Leaders I, Predicting Teacher Ratings of Leader Behaviour. *Leadership Q.*, 10: 609-636.
- Sharan S (2010). Cooperative Learning for Academic and Social Gains: valued pedagogy, problematic practice. *Eur. J. Educ.*, 45:300-313.
- Sharan S (1990). *Cooperative Learning: Theory and Research*. New York: Praeger
- Silverman D (2000) *Doing Qualitative Research: A Practical Handbook*, London: Sage
- Slavin R (1984). Students Motivating Students to Excel: Cooperative Incentives, Cooperative Tasks, and Student Achievement. *Elementary School J.*, 85: 53-63.
- Stipek D (2002). *Motivation to Learn: Integrating Theory and Practice*. Boston: Allyn and Bacon.
- Watson M, Solomon D, Dasho S, Shwartz P, Kendzior S (1994). CDP Cooperative Learning: Working Together to Construct Social, Ethical, and Intellectual Understanding. In: Sharan S (Eds.) *Handbook of Collaborative Learning Methods*. London: Greenwood Press.
- Watson SB (1991). Cooperative Learning and Group Educational Modules: Effect on Cognitive Achievement of High School Biology Students. *J. Res. Sci. Teach.*, 28: 141-146.
- Wood T, Cobb P, Yackel E (1995). Reflections on Learning and Teaching Mathematics in Elementary School. In: Steffe LP, Gale J. (Eds.) *Constructivism in Education*. Hillsdale, NJ: Lawrence Erlbaum, pp. 401-422.
- Yamaguchi R (2001). Children's Learning Groups: A Study of Emergent Leadership, Dominance, and Group Effectiveness. *Small Group Res.*, 32: 671-697.