

**Using STAD in an EFL Elementary School Classroom in
South Korea:
Effects on Student Achievement, Motivation, and Attitudes
Toward Cooperative Learning**

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Using STAD in an EFL Elementary School Classroom in South Korea: Effects on Student Achievement, Motivation, and Attitudes Toward Cooperative Learning

Abstract:

There is a large body of research supporting the positive effects of cooperative learning, not only on student academic achievement, but also on other important factors such as student motivation, student relations (including group skills and acceptance of lower level students) and liking of school. A form of cooperative learning known as Student Teams Achievement Division (STAD) developed by Robert Slavin and his colleagues, is the most heavily researched cooperative learning approach, and has produced positive effects across a wide range of grades and subjects. There has, however, been little research on the effectiveness of STAD in an English as a Foreign Language (EFL) environment. Contemporary theories of second language learning stress the importance of student centered learning where much learning is done through peer-to-peer interaction. STAD, it will be argued, may prove to be an ideal approach in these settings where there is often a need to balance student centered learning with the demands of a test centered curriculum. This study, although limited in duration and scope, seeks to examine the impact of STAD in a South Korean elementary school. STAD was used with all grade six classes and was compared to grade five classes which worked in groups lacking the key components of STAD. Both groups completed pretest and posttest surveys which measured changes in exposure to English education outside of the classroom, liking of the English class, attitudes toward working in cooperative learning groups, and changes in academic scores. The results of the study suggest that STAD had significantly positive effects on student achievement and students' attitudes towards learning English. The effect of STAD was greater for achievement than for attitudes toward learning English.

The setting:

The study was conducted over a two-month period – from October to December of 2005 – with grade five and six students at Yangeun Elementary School in Busan, South Korea. The students primarily come from middle class backgrounds, with the school having better performance scores than the typical school in the city. Each class consists of approximately thirty-five students, mixed according to gender, level and previous exposure to learning English (outside of the English school English classroom). Ideally, the experimental and control classes would have been chosen randomly, but because it wasn't possible to get permission to set up the study in this way, it was necessary to have the two groups chosen by grade, with all classes in one grade being exposed to STAD and all classes in the other grade being taught in the usual manner. Students in both grades were organized in groups of four to five students, but only the grade six students were equally divided according to gender and level, and exposed to the key components of cooperative learning and STAD. The fifth grade students were mixed according to gender but not level (arranged in order of student numbers).

The English curriculum:

Students in Korea begin learning English in elementary school from the third grade and study the subject once a week – for forty minutes – in both grades three and four. In grades five and six, students receive two classes each week. Each chapter in the textbook generally focuses on a specific communicative ability (such as expressing time or giving directions) and students complete one chapter every two weeks, with a total of four lessons for each unit. At the elementary school level, the focus is primarily on listening and speaking, with reading and writing being introduced from grade five and focused on heavily from grade seven. Although there is no formal assessment for English in elementary schools, most teachers give self-made quizzes and tests to check student learning. The curriculum – called the Seventh Curriculum- is based on communicative language theory which emphasizes student centered learning, communicative competence, and maximum opportunities for the use of English in the classroom. The reality, however, is often quite different, partly because many teachers find it difficult to adopt such an approach in large heterogeneous classes, and partly because many of them lack the training needed to effectively adopt such an approach.

Defining Cooperative Learning:

Slavin (1992) stated that cooperative learning refers to instructional methods involving small heterogeneous groups working together, usually toward a common goal. He added that this approach to learning involves changes to both task structure and incentive structure. The task structure refers to the ways in which the teacher or students set up activities designed to result in student learning where a cooperative structure involves students working together to help one another. The incentive structure moves away from a competitive one in many classrooms to a cooperative one so that the success of one student is positively related to the success of others. Johnson and Johnson (1994a) highlighted the importance of how students interact, arguing that it can affect learning, liking of school and other students, as well as self-esteem. Abu and Flowers (1997) added to this, stating that cooperative interactions provide students with the skills needed for working with others outside of the school setting. As Johnson and Johnson (1994b), pointed out, however, it is not enough to just put students in groups and tell them to work together for cooperative learning to work. How such groupings are structured will largely determine whether or not they will be more effective than competitive or individualistic groupings. Cooperative learning is important for creating inclusive classroom environments that meet the needs of all students because it takes the heterogeneity into account, encouraging peer support and connection. Given that most classrooms are heterogeneous, it only makes sense to use an approach to teaching and learning which accounts for this heterogeneity.

Key components of effective cooperative learning:

Johnson and Johnson (1994a, 1994b) outlined five key components for effective cooperative learning; positive interdependence, individual accountability, promotive face to face interaction, small group skills, and group processing.

Positive Interdependence:

- Important for students to perceive themselves as interdependent, sharing a mutual fate which is mutually caused. This creates a “sink or swim” mentality where the success of the group is dependent on the success of all of the group members, ensuring a social interdependence in the group. Students come to perceive that they are linked with group mates in such a way that they cannot succeed unless their groupmates do (and vice versa) and/or that they must coordinate their efforts with the efforts of others in the group to complete a task (Johnson and Johnson, 1994a).
- Cooperation allows for positive interdependence where all group members work together to accomplish shared goals. Thus, individuals seek outcomes that are both beneficial to themselves and the group members.
- Promotive goal interdependence where goals are positively linked in such a way that the probability of one person obtaining his/her goal is positively correlated with the probability of others doing so.
- Reward interdependence where all members in the group are given the same reward (1994a, 1994b).

Individual Accountability:

- Slavin (1995) argued that when cooperative learning is poorly constructed, cooperative learning methods can allow for the “free rider” effect “in which some group members do all or most of the work (and learning) while others do little or nothing.
- The key to eliminating this is to create individual accountability to ensure that all students learn and that no members in the group are ignored.
- By having both group goals and individual accountability, students are provided with an incentive to help each other and to encourage each other to put forth maximum effort.
- Johnson and Johnson (1994b) argued that individual accountability can be achieved through the use of individual assessment which is then used to determine the success level of the group as a whole.
- Individual accountability can be achieved by frequently highlighting the contributions of each member, assessing who needs more help, and redundancy among members’ efforts and identifying unique contributions of each group member.
- Teachers need to assess how much effort each member is contributing to the group’s work, provide feedback to groups and individual students, help groups avoid redundant efforts by members, and ensure that all members are responsible for the final outcome.

Johnson and Johnson (1994a) highlighted key factors for structuring individual accountability:

- Keeping the group size small
- Giving students individual tests where they cannot seek help from others
- Randomly choosing students to answer questions
- Observe the group and record the frequency on contribution of each member
- Assigning one member to be a “checker” who asks other group members to explain the reasoning and rationale underlying group answers.
- Having students teach what they learned to someone else.

Promotive face-to-face interaction:

- The physical arrangement of small heterogeneous groups, encourages students to help, share, and support each other’s learning.
- By working closely together, students can promote each other’s success through explanations, teaching, checking for understanding, discussions, connecting old and new learning.

Interpersonal and small group skills:

- Johnson and Johnson (1994a) argued that the more socially skillful students are, and the more attention teachers pay to teaching and rewarding the use of social skills, the higher the achievement that can be expected within cooperative learning groups.
- Students need to learn interpersonal skills such as active listening, staying on task, asking questions, conflict management and resolution and so forth.

Group processing:

The Johnson’s (1994a) believed that group processing takes place on two levels, in small groups and the whole class. To allow for group processing at the group level, they argued that teachers should allow time and the end of each class for groups to process how effectively the members worked together. Doing so, they argued would:

- Enable learning groups to focus on maintaining good working relationships among members.
- Facilitate learning of cooperative skills.
- Ensure that members receive feedback on their participation in the group.
- Ensure that students think on the metacognitive as well as cognitive level.
- Provide a means to celebrate the success of the group and to reinforce positive behaviors.

Processing at the class level can be done by having the teacher occasionally observe groups, analyze problems and then provide feedback to the whole class.

Student Teams Achievement Division (STAD)

To address the key components of effective cooperative learning, Robert Slavin and his colleagues at John Hopkins University, developed an approach called Student Team Achievement Division (STAD). It is the most extensively researched of all cooperative learning methods and is very adaptable to a wide range of subjects and grades. Slavin (1994) pointed out that STAD is not meant as a comprehensive teaching method, but rather as a way to organize classes, with the principal goal being to accelerate the achievement of all students. The approach operates on the principle that students work together to learn and are responsible for their teammates learning as well as their own.

Consistent with the core principles of cooperative learning outlined earlier, STAD emphasizes having team goals and success dependent on the learning of all group members. Slavin believed that the most important thing was for students to learn as a team and to recognize that the work of the team is not completed until all team members understand the content (Slavin, 1994). Slavin (1994, 1995) outlined three central concepts of STAD; team rewards, individual accountability and equal opportunities for success.

Team rewards:

- These can take the form of certificates or other rewards which are given if a STAD team achieves above a designated criterion.
- The teams are not in competition with each other but rather, all or none of the teams can achieve rewards depending on how they score.

Individual accountability:

- The success of the team depends on the individual learning of all team members.
- The activity focuses on team members tutoring one another and making sure that everyone on the team is ready for the quiz (or other assessment) that students take individually.

Equal opportunities for success:

- What students contribute to the team is based on their individual improvement from their own previous success.
- Ensures that high, average and low achievers are equally challenged to do their best and that the contributions of all members are equally valued by the team.

Implementing STAD in the classroom:

Slavin (1995) outlined four key components in the implementation of STAD in the classroom; class presentations, teams, quizzes and team recognition. These components work on a repeated cycle of about three-five days (or class periods).

Class presentations:

The teacher begins by presenting the lesson to the students for one or two periods of

instruction keeping the focus of the lesson directly linked to group assignments and individual quizzes of the STAD unit. The key things that teachers should stress during the lessons include (Slavin, 1995):

- tell students that what they are about to learn and why it is important
- briefly review any presentation skills or information
- stick close to the objectives
- focus on the meaning of the content rather than memorization
- actively demonstrate concepts or skills
- frequently assess student comprehension
- call on students at random to answer questions
- explain why an answer is correct or incorrect
- move rapidly from concept to concept
- maintain momentum
- use short assignments with one or two problems for students to work on

Teams:

- STAD teams are comprised of four (or five) members who are mixed in level, gender and ethnicity.
- It is important for teachers to stress to students that their work as a group isn't finished until all individuals in the group have a firm grasp of the material. (Slavin, 1994). Individual accountability is ensured because the success of the team depends on the learning of all the members.
- Each team is given two worksheets and answer sheets to work on together, which can be done either by working with all members together or sub-divided into pairs. It is the responsibility of students to tutor each other until every student in the group is able to get a perfect score on the quizzes (Slavin, 1994).
- Students should be taught to know when and how to seek help from each other and how to provide effective explanations (Tomei and Dembo, 1998). Teachers can help to facilitate this process by circulating from group to group asking questions, and encouraging students to explain their answers to gain a deeper understanding of the content (Hassard, 2000).
- Slavin (1994) suggested keeping teams together for about five to six weeks and then making new teams to give members of low performing teams a new start.

Assigning teams:

- Teachers should begin by making one summary sheet for each group of students and ranking students from highest to lowest on previous performance.
- Teachers go down the ranking list assigning each student in order a different letter according to the total number of teams (eight teams would be A-H). Once the teacher gets to the last letter used, they start over in a reverse order (A-H and then H-A).
- The teacher should ensure that each team is equally divided according to gender and ethnicity (Slavin, 1994).

Quizzes:

- After each team has had one or two periods to work together to learn the content, they are each tested individually (no help from teammates). The purpose of this is to ensure individual accountability for learning the material.
- The key component of a students' score is the individual improvement score which is the degree to which a student improves from their own previous scores. This allows for equal opportunity for success where “high, average and low achievers are equally challenged to do their best, and the contributions of all team members are valued” (Slavin, 1994).
- Any student, regardless of his/her level can contribute equally to the team score. Each student begins with a base score calculated from an average of their grades on previous work, and are awarded points according to how well they can improve on these base scores. Team points are calculated as follows:
 - more than ten points below the base score – five points
 - one to ten points below base score – ten points
 - base score to ten points above – twenty points
 - more than ten points above or a perfect score – thirty points.
- Individual improvement scores are added together and divided by the number of people in the group to get a team score and teams are awarded according to how well they perform as a team. One way this could be done could be as follows: (Slavin, 1994, 1995).
 - 25-30 points – Super Team
 - 20-24 points – Great Team
 - Less than 20 – Good Team

Recognition:

- Teams that surpass the criterion set out should be given some kind of reward for their success (e.g. group certificate).
- Teachers can be creative in how the awards are distributed and the important thing isn't so much the use of large rewards, but rather the recognition of students' accomplishments (Slavin, 1995).
- Slavin referred to research done by Elizabeth Cohen which found that it is important for teachers to be extra sensitive to the low status students who consistently have low expectations for competence. When these students do well, they should be provided with immediate, specific and public recognition.
- To maximize the increase in student motivation, Slavin (1994) suggested that teachers calculate the student and team scores quickly and give out the rewards.

Theoretical Influences of Cooperative Learning and STAD:

The theoretical influences of Cooperative Learning and STAD have come from a variety of academic disciplines, ranging from Psychology to Anthropology. The psychological influences have come from both researchers of motivation and those of Cognitive Psychology. In addition, the work of theorists such as Lev Vygtsky's socio-cultural theory has played an important role in developing a comprehensive theory of cooperative learning. The next section of the paper will address these key theoretical underpinnings of cooperative learning and then argue that, rather than being conflicting approaches, they can be combined to create a more holistic theory of cooperative learning.

Motivational Theories:

Slavin (1995) pointed to research done by Deutsch (1949) which argued that there are three goal structures; cooperative, competitive and individualistic. In a competitive classroom, students compete for success, with the success of one student being negatively related to the success of another. In an individualistic classroom, no relationship exists. Cooperative goal structures ensure that the success of the group is dependent on the success of all members. As such, it is in the personal interest of each student to help the other students and they will likely show more positive responses to individuals who show improvement. This leads to students encouraging one another and expressing norms which reward academic success (Slavin, 1995). Work within the Piagetian tradition argues that the interaction among students on learning tasks will lead to increased achievement. As students interact with one another, cognitive conflicts arise as inadequate reasoning is exposed, resulting in increased learning. (Slavin, 1995). As Johnson and Johnson (1994b) pointed out, the positive interdependence created by CL groups helps to increase the motivation in the group. (Slavin, 1995). Referring to work done by Lewin (1935,1948), Johnson and Johnson (1994b) argued that there is an intrinsic state of tension within group members which motivates movement toward the accomplishment of desired common goals. This is based on the assumption that, because outcomes are dependent on each student's behavior, students will be motivated to help the group to be rewarded. In other words, the group incentive induces students to encourage goal-directed behaviors among group mates. Because students are working towards a common goal, it can be expected that they will be more motivated to reward academic success within the group (Slavin, 1993). One may assume that if students are rewarded for their improvement from previous performance, they will be more motivated to do so in the future. In discussing motivation, it should be pointed out that there are two types of motivation; intrinsic and extrinsic. Intrinsic motivation causes students to engage in learning for their own sake. They come to feel that learning is important with respect to self-images, and seek out learning activities for the joy of learning. Extrinsic motivation, on the other hand, comes from an external source such as the avoidance of punishment or the attainment of a reward.

One could argue that the team recognition for improvement scores acts as an extrinsic rather than intrinsic motivator - the notion that students seek to get higher scores because of the team reward. Slavin (1995) referred to a study in which he conducted in 1978 which found that STAD leads to perceived internal locus of control among students. In

contrast to these findings, Cognitive Evaluation theory states that the giving of a performance-based external reward in fact leads to perceived locus of control, which undermines students' intrinsic motivation (Deci et al, 2001). This happens when students perceive the reward to be a vehicle to control not only what the person does but how well he or she does it. On the other hand, the same study indicated that if the student interprets the reward as an affirmation of competence, the result can be the maintenance or increase of intrinsic motivation. Thus, teachers need to be careful to ensure that the atmosphere of the class is not one where students feel coerced to perform well on tasks due to the implicit peer pressure of the method. Teachers should instead promote an atmosphere of encouragement and positive group relations.

Social Cohesion Perspectives:

Slavin (1993) argued that this approach is related to the motivational perspective and argued that the cohesiveness of the group is an important factor in determining the impact of CL on achievement. When the students in group genuinely care for each other, there is an intrinsic motivation to help each other. Teambuilding activities are needed to prepare students for cooperative learning in addition to processing or group self-evaluation during and after activities. Theorists within this perspective downplay or reject group incentives and individual accountability held by motivational researchers to be essential. Instead, they argue that the bonds in the group will increase encouragement and helping behaviors.

Cognitive Perspectives:

Motivational theories of cooperative learning focus primarily on the degree to which cooperative goals change students' incentives to do academic work. Cognitive theories, on the other hand, address the effects of working together in itself (Slavin, 1995). Cognitive theorists argue that achievement is affected less by motivation than by the mental processing of the information. Theories within the cognitive tradition fall within two areas of Psychology; Developmental and Cognitive Elaboration.

Developmental theories:

Slavin (1995, p. 17) stated that the "fundamental assumption is that the interaction among children around appropriate tasks increases their mastery of critical concepts" Theories from this tradition have been heavily influenced by the work of Piaget and Vygotsky, particularly Vygotsky's concept of the Zone of Proximal Development (ZPD). This refers to the gap between what students can do on their own and what they can potentially do under the guidance of more capable individuals (Slavin, 1993). The notion is that children of similar ages are likely to be operating within one another's ZPD, modeling in the collaborative group behaviors more advanced than those they could perform as individuals (Slavin, 1993). Additionally, Piaget believed that social arbitrary knowledge such as language needs to be learned through interactions with others. These interactions would lead to cognitive conflicts, exposing inadequate reasoning and creating a disequilibrium. The result would be the emergence of higher-quality understandings (Slavin, 1993).

Cognitive Elaboration:

The key notion behind Cognitive Elaboration theories is that if information is to be retained in memory and related to information already there, the learner must engage in cognitive restructuring, or elaboration of the material. The most effective ways to achieve this, according to the theory, is to explain the material to someone else. (Slavin, 1993).

Sociocultural theories:

Extending from Developmental perspectives of thinkers like Piaget and combining it with social perspectives given by disciplines like Anthropology, thinkers such as Lev Vygotsky provided important insight into the development of theories in cooperative learning. Abdullah and Jacobs (2004) stated that both CL and Sociocultural Theory overlap because of their focus on building learning environments which foster mutual aid. The ideas of Vygotsky and others have found many applications in second language pedagogy because he viewed humans as culturally and historically situated. His emphasis was on the ways students help each other learn rather than learning on our own. The key difference between Vygotsky and Piaget, was Vygotsky's emphasis on the importance of culture (Cole and Wertsch 1996). And as Ivic (2000) pointed out, Piaget placed the emphasis on structural aspects and on the essentially universal laws (or biological origin) of development, whereas Vygotsky stressed the contribution of culture, social interaction and the historical dimension of mental development. Vygotsky took a socio-historical approach and believed that society is the bearer of cultural heritage without which the development of the mind is impossible. Vygotsky believed that human beings are not complete unless they are connected to others and that humans are more than products of biology alone, but also of their cultures (Ivic, 2000). For him, intellectual functioning is the product of our social history, and language is the key mode by which we learn our cultures and through which we can organize our verbal thinking and regulate our actions. Children learn such higher functioning from interacting with the adults and children around them. Higher mental functions such as thinking, reflecting, reasoning and problem-solving occur in cooperation and interaction with others within a social and cultural framework. The learning begins and the social level through interaction and later becomes mental processes of the individual. All higher mental functions are seen as internalized social relationships (Ackerman, 2001). The higher mental functions that are part of the social and cultural heritage of the learner will shift from the socially regulated to the self-regulated (Ghefaili, 2003). Abdullah and Jabobs (2004) argued that Vygotsky's strategy was essentially a cooperative learning one because he, himself, created heterogeneous groups and provided them not only with the opportunity, but the need for cooperation and joint activity by giving them tasks that were beyond the developmental level of some, but not all of them. From an educational perspective, this concept is important because it demonstrates the need for learning in a cooperative and collaborative context where learners learn from more and less capable peers and from the teacher. The work of Vygotsky has heavily influenced contemporary theories such as Cognitive Apprenticeship, Situated Cognition and Learning, and Communities of Practice.

Cognitive Apprenticeship:

The term Cognitive Apprenticeship was coined by Collins, Brown and Newman in 1989 and refers to an instructional design based on current understanding of how individuals learn (Ghefaili, 2003). The approach has roots in Vygotskian thinking with Sociocultural Theory and his concept of the ZPD as well as from Situated Cognition and traditional apprenticeship. The primary goal of Cognitive Apprenticeship is to make the thinking processes of a learning activity visible to both the students and the teacher so that the teacher can guide student learning through methods such as modeling, coaching, scaffolding and fading (Ghefaili 2003). In an educational context, the novices (students) serve as resources for each other and challenge one another, while the expert (teacher) is more skilled and has a broader vision of the important features of the activity, and guides students through a process of moving from peripheral participation to central participation. Hewitt and Scardamalia (1998) argued that the concept of ZPD is at the heart of this approach. The teacher can work with students within this zone, gradually transferring responsibility for activities to the student as competence develops. The less experienced person learns from a more experienced one (more capable peers or teacher) within a framework that is cognitively reachable for the learner (within his/her ZPD).

Situated Cognition and Learning:

Barab and Duffy (2000) pointed out that there are two dominant themes of learning; the first based on Psychology and Education, with a focus on situating content in authentic learning activities at the individual level; and the second having roots in Anthropology and largely based on the work of Lave and his colleagues. Within this approach, the focus is on communities and what it means to learn as a function of being part of a community. Situative theories involve a shift away from acquisition and transfer metaphors of Cognitive Psychology, and focuses instead, on metaphors of participation and community (Chan and Aalst). The shift from learning of skills to the development of identity as members of a community (group) and becoming knowledgeable skillful are viewed as part of the same process, with the former motivating, shaping, and giving meaning to the latter, which it subsumes (Barab and Duffy, 2000).

Communities of Practice:

The concept of Situated Learning is closely linked with ideas of community because of the focus on increasing levels of participation within Communities of Practice. The heterogeneous groups that students work in create a sense of community, providing them with the setting for the social interaction needed to engage in dialogue with others to see different points of view. By situating student work in the context of group activity and having students work together towards shared goals, students can engage in mutual scaffolding.

Role of the Instructor:

It is important for teachers to rethink their role within the environment of cooperative learning classes and avoid the tendency to merely engage in traditional, transmission-based teacher-dominated methodologies. The teacher's role needs to change from that of a knowledge transmitter to one of coach or facilitator of students' understanding (Ghefaili, 2003). This is not to say, however, that the teacher must turn over all responsibility for the learning onto students themselves. Teachers have a broader view of what information needs to be learned and the heterogeneity of the groups can benefit students by enabling more capable students to work with less capable ones within their ZPD.

Reconciling the different theories:

Although the various theories discussed seem to vary, Slavin (1993) argued that they are all correct in some circumstances, but more are probably both necessary and sufficient in all circumstances. Research on motivation and social cohesiveness tends to take place in real classrooms over extended periods, since both are assumed to take time to show effects. Developmental and Cognitive Elaboration research tend to be short, making issues of motivation moot. Slavin (1993) argued that the various theories are complementary rather than contradictory. Motivation drives cognitive process, which in turn, produces language. The effects of extrinsic incentives like group rewards may increase the cohesiveness, caring, and pro-social norms (community development) among group members, which, in turn, may affect cognitive processes.

Research Supporting the Effectiveness of Cooperative Learning:

Cooperative Learning and Achievement:

- Slavin (1995) argued that cooperative learning has clearly shown positive effects on student achievement.
- Sixty-three of ninety-nine experimental-control comparisons significantly favored cooperative learning.
- Johnson and Johnson (1994b) echoed this, stating that CL has generally led to higher achievement and productivity than competitive or individualistic classrooms.
- Johnson, Johnson and Stanne (2000, p.5) did an extensive search and found 164 studies investigating eight cooperative learning methods. They found that all methods had a significant positive impact on student achievement. They concluded that “the amount, generalizability, breadth, and applicability of the research on cooperative, competitive, and individualistic efforts provides considerable validation of the use of cooperative learning, perhaps more than most other instructional methods”.
- There are over 900 research studies validating the effectiveness of CL, done by different researchers in different areas working in different settings and countries and periods of time, providing solid generalizability of the approach. The researchers argued that current research suggests that, if implemented correctly, the likelihood of positive results is quite high.

- Abu and Flowers (1997) pointed to a study conducted by Humphreys, Johnson and Johnson (1982) which compared cooperative learning, competitive and individualistic learning strategies in Science classes. The researchers found that students who were taught CL methods learned and retained more.
- Similar results were found by Sherman and Thomas (1986) in Math classes (Abu and Flowers, 1997).
- Johnson, Maruyama, Nelson and Skon (1981) did a meta-analysis of 122 studies related to CL and found strong evidence for the superiority of CL in promoting achievement over competitive and individualistic strategies.
- Johnson and Johnson (1994b) referred to studies conducted by Mesch and Lew which contained conditions to test positive interdependence. In two of the three studies, achievement was higher under positive goal interdependence than when subjects worked individually but had an opportunity to work with others. They found that the effect was even greater when combined with reward interdependence, thus concluding that the two types of outcome interdependence are additive.
- Johnson, Johnson and Smith (1995) found that the test scores of students in CL groups were about two thirds of a standard deviation higher (about 25 percentage points) than the test scores of students in competitive or individualistic classrooms (Biehler and Snowman, 1997).

Research on STAD

Academic Achievement:

- According to Slavin (1995), STAD is the most heavily researched of all the CL methods and the median effect size for all the studies was +.32 on all tests and +.21 on standardized measures, and these positive effects have been consistent in all subjects.
- Seventeen out of twenty-two studies of STAD in grades three through twelve, found significantly higher achievement for this method than for traditional instruction.
- Slavin (1994) referred to a study he conducted with Karweit (1984) which used STAD for a whole school year in an inner-city ninth grade math class and found that student performance on standardized tests increased significantly.
- The greatest positive effects on student learning occur when groups are recognized or rewarded based on the individual learning of each of the group members. Using STAD where group goals and individual accountability matters, produced an effect size of +.32 compared to just +.07 across twenty-five studies that did not incorporate group goals and accountability (Slavin, 1995). Slavin (1995) pointed to a study conducted by Huber, Bogatzki and Winter (1982) which compared STAD with traditional groups lacking group goals and individual accountability and found that the STAD group scored significantly better with an effect size of +.23.
- There were equal benefits for high, average and low achievers in comparison to their counterparts in control groups (Slavin, 1995).

- Slavin (1993) argued that the evidence from the applications of CL in elementary and secondary schools provides empirical support for the motivationalist position that group rewards are necessary for the effectiveness of CL. The use of group goals or group rewards enhances the achievement outcomes of CL if and only if the group rewards are based on individual learning of all group members.

Group Cohesiveness:

- Slavin (1993) pointed out that there is inconsistent support for the notion that group cohesiveness through team building alone (without group incentives) is enough to increase achievement.
- An emphasis on team building alone without group rewards has generally been no more effective than traditional instruction on student achievement. As such, both are important for maximizing the effects of cooperative learning.

Developmental Perspectives:

- Slavin (1993) stated that there is a great deal of empirical support for the idea that peer interaction can help non conservers become conservers.
- Kuhn (1972) found it is important for group members to be within each other's ZPD.
- A small difference in cognitive level between the child and the social model was more conducive to cognitive growth than a larger difference.

Cognitive Elaboration:

- Slavin (1993) referred to research conducted by Noreen Webb (1989, 1992) which discovered that students who gained the most from CL activities were those who provided elaborated explanations to others. Students who received these explanations, learned more than those who worked alone but less than those doing the elaborated explanations.
- Ross and Cousins (1995) tested how students gave explanations in CL groups by observing the gap between student practice and the ideal model. They found that the help seekers are more likely to get an elaborated explanation of it is specific, directed at someone with knowledge, expressed with courtesy, and repeated when unsuccessful. They argued that without training in how to seek and give help, the explanations may be inadequate and full of errors.

Self-esteem:

- Johnson and Johnson (1994b) found that cooperative learning generally leads to greater self-esteem than competitive or individualistic efforts.
- Out of more than 79 studies on self-esteem, the weighted effect sizes for cooperation versus competition and cooperation versus individualistic efforts were .60 and .44 respectively.

- Students gain increased self-esteem from achieving challenging goals, from gaining the respect of others, and from favorable comparisons with others.
- CL can help students value and perceive themselves positively (<http://www.slc.sevier.org/collabop.htm>).
- Slavin (1995) argued that self-esteem is the most important psychological outcome of CL methods and referred to a study by Madden and Slavin (1983) where they found significantly greater general self-esteem in STAD groups than in control groups.

Liking of classmates and Feeling Liked:

- Slavin (1975) and Slavin, Devries and Hulten (1955) found that students who showed improvement in STAD groups also improved their status in the classroom.
- Slavin (1995) , in referring to Deutsch (1949) and Thomas (1957), argued that when students work together to accomplish a goal, they come to express norms in favor of doing whatever is necessary for the group to succeed.
- Students are more liked in CL situations than in competitive ones because students come to value effort more than ability, and because students come to enjoy helping low-performing peers.
- Because students themselves become teachers, they learn twice through teaching and are more likely to be exposed to a greater variety of problem-solving strategies.
- These peer explanations can often be more helpful to students than those provided by adults.

Social Skill Development:

- The process of working in groups can teach students important skills which are important in life such as leadership, conflict resolution, interpersonal communication and so forth.
- Interaction in cooperative learning groups allows students to practice skills through observing, performing and receiving feedback on social behaviors.

Acceptance of Mainstreamed Students:

- As cited by Slavin (1995), a STAD study by Madden and Slavin (1983) showed that academically handicapped students received fewer rejection choices in STAD groups than in control groups.

Positive pro-academic norms:

- Slavin (1995) stated that there is empirical support that STAD creates a classroom atmosphere which supports pro-academic norms among students.
- This was supported in a study published in *Teacher's Learning with Children* (July, 2001), which found that STAD was effective in organizing large classrooms in a positive manner so that team members supported each other.

Locus of control by students:

- Slavin (1995) noted in a study he conducted in 1978 that STAD increased a students' feeling that their outcomes depended on their performance rather than luck, thus leading students to feeling that they had a chance to succeed in school.

Time on task and classroom behavior:

- Cooperative learning, particularly STAD, was found to keep students on task and more engaged in class vs. control students.
- In addition, Slavin mentions a study by Hawkins, et. Al (1988) where STAD and TGT were implemented in middle schools over the course of a year. Those schools were found to have fewer suspensions and expulsions than control students and the students also seemed to gain more in educational goals and positive attitudes towards school.
- A study by Slavin and Madden (1989) suggested that cooperative learning is an instructional method that accelerates student achievement, particularly those students-at-risk in schools.

Applying Cooperative Learning in the Second Language Classroom:

Cooperative learning strategies like STAD, have proven successful across a wide range of subjects and age levels. One of the most important questions of this study is whether or not these approaches can be effective in the second language classroom. Ghaith (2003) stated that research done by people like Kagan, Kessler, and Mcgoarty has established the theoretical relevance of cooperative learning in second language instruction because of its ability to provide maximum opportunities for meaningful input and output in an interactive and supportive learning environment. CL also integrates language and content learning and its varied applications are in harmony with the pedagogical implications of the input, socialization, and interactive theories of L2 acquisition. This is because CL enhances the motivation and psychological adjustment of language learners. Kagan (1995) argued that language acquisition is determined by a complex interaction of a number of critical **input**, **output**, and **context** variables.

Input:

- According to Abdullah and Jacobs (2004), the key assumption of the input hypothesis is that students acquire a second language as they comprehend meaning through written or spoken words.
- Kagan (1995) argued that language is best acquired when the input is **comprehensible**, **developmentally appropriate**, **redundant**, and **accurate**.

➤ **Comprehensible:**

- In small groups where students work with their peers, it is possible for students to adjust their input to make it more understandable to others.
- The speech can be made level appropriate to the listener to regulate meaning.

➤ **Developmentally appropriate:**

- It is important that the input be within a student's ZPD so that they can gain an understanding through help from others.
- The nature of cooperative learning helps to stimulate development to the next stage of language development.
- The peers in the group can provide an extra input source and this input may carry better outside the class and be of greater interest to the students.
- Because the input from peers tends to be more easily understood by the other students, the language would likely be more motivating and decrease the anxiety often experienced when having to produce L2 in the classroom setting.

➤ **Redundant:**

- Students should receive input repeatedly from a variety of sources to ensure retention of the content.
- The cooperative learning group is a natural source of redundant communication where the variety of input received can help the listener to triangulate in on the meaning.
- This fosters meaning negotiation by such means as requesting repetition, explanation and clarification.

➤ **Accurate:**

- This is one area where the cooperative learning groups may be inferior to teacher-led whole class learning since students may often make errors.
- When having students work in groups, teachers should monitor the progress of the groups and check for any accuracy problems and provide correction.
- Teachers should additionally encourage students to sort out communication difficulties on their own but be available if needed.
- As students learn cooperative and collaborative skills by working together, they will increase the strategies needed for effective interaction.

➤ **Output:**

- Language acquisition is fostered by output that is **functional and communicative, frequent, redundant, and consistent with the identity of the speaker.**
- Abdullah and Jacobs (2004) argued that getting feedback on the comprehensibility of a student's second language output is essential to promote fluency, and pushes students to engage in syntactic processing of language, give them opportunities to test hypotheses about what works, and affords them with the opportunities to receive feedback from others.
- **Functional and Communicative:**
 - The language used should be representative of how language is used in everyday settings.
 - Cooperative learning groups allow for expressive, functional, personally relevant, representative language output that is critical for language acquisition (Kagan, 1995).
- **Frequent:**
 - Kagan (1995) believed that the greatest advantage of cooperative learning is its ability to maximize output per student.
 - This is appropriate for large classes to let students do more talking.
- **Redundant:**
 - By speaking repeatedly on the same topic, students can increase fluency of the language.
- **Identity Congruent:**
 - Increased fluency can be achieved when students practice classroom speech which projects the identity associated with the speech (Kagan, 1995).
- **Context:**
 - Students can experience increased learning in a context which is **supportive and motivating, communicative and referential, developmentally appropriate, and feedback rich.**
 - The nature of the cooperative learning groups can provide a context where group interaction is structured in an attempt to balance opportunities that each student has for creating output (Abdullah and Jacobs, 2004).
- **Supportive and motivating:**
 - Cooperative learning groups can provide a supportive and motivating context for a variety of reasons, including:

- More frequently asked questions.
- Need to communicate to accomplish cooperative learning tasks.
- Peers on the same side (working for shared goals)
- Cooperative learning structures demand speech
- When taught the appropriate skills, students in cooperative learning groups will exhibit praise and encouragement.
- Students are made interdependent because of the need for all of them to learn the same content.

➤ **Communicative and referential:**

- Students speak in real time, about real events and objects, to accomplish real goals.
- This forces the negotiation of meaning, thus facilitating acquisition.

➤ **Developmentally appropriate:**

- Cooperative learning groups allow students to interact within each other's ZPD.

Feedback rich:

- Students in cooperative learning groups get immediate feedback and correction opportunities in the process of communication.
- These feedback opportunities occur in a natural context, making it easier to assimilate and reducing student anxiety.

Research Questions:

This study sought to address three key research questions:

- 1) Does STAD contribute to more positive attitudes toward learning English?
- 2) Does STAD contribute to higher English achievement?
- 3) Does STAD contribute to more positive attitudes towards cooperative learning?

Method

Sample:

This study was conducted for approximately eight weeks from early October to early December 2005 with grade five and six students studying English as a Foreign Language (EFL) at Yangeun Elementary School in Busan, South Korea. Prior to the study (late September, 2005), all students were administered a pretest survey containing questions to measure changes in exposure to English outside of the classroom, changes in students'

attitudes about learning English, and changes in students' attitudes about cooperative learning. The same survey was given again at the end of the study. The original plan was to randomly select all classes to be in the experimental and control groups, but due to resistance from both the school Principal and Korean English teachers, it was decided to place all six grade students in the experimental group and all five grade students in the control group. The sample consisted of eight grade six classes with approximately thirty-five students in each class (280 students) and seven grade five classes of about the same size (245 students).

Experimental group:

- The experimental group consisted of eight grade six classes with 35-38 students in each class.
- Following the criteria for dividing groups set out by Slavin (1994, 1995) each class was divided into eight groups of four to five students.
- Each team was assigned a letter from A-H and asked to create a unique team name corresponding with the letter and to create a team chant. This was done to encourage team bonding and identity.
- Each team had their photo taken and these photos were later used as team rewards, where they were publicly displayed whenever any teams achieved "Super Team" status (a team score of 25-30 points).
- The grades used to calculate the base scores were from the Korean English teacher's scores based on performance in the first school semester (March – July). Since there is no prescribed formal assessment, these grades were relatively subjective, but should have been consistent for all grade six classes since they were given by the Korean English teacher who taught all of the grade six classes. The researcher did not play a role in calculating these grades since he did not arrive at the school until September of 2005.
- Each class was heterogeneous for gender, exposure to English outside of the classroom, and level.
- Photos were taken of each group in the class and would be displayed on a large bulletin board for a period of two weeks for all teams that achieved "Super Team" status.
- Students studied English for two forty minute classes each week, one with the Korean English teacher alone and one with both the Korean English teacher and Canadian English teacher.
- Students completed one chapter in the textbook (name of textbook) at the end of every two weeks (four lessons) and a STAD quiz was given during fourth class of each lesson.
- Each group was given two practice quizzes containing about twenty questions (mostly from the lesson just learned).
- Students were regularly reminded of how to work together in their groups and the importance of helping each other. Whenever possible, students were encouraged to engage in group processing at the end of the class so as to reflect on how well they worked together and how they could improve next time.

- While working on the practice quiz, students in the STAD groups were encouraged to work with a partner of a different level to teach and quiz each other. They were also allowed to work together as a whole team if they preferred. The most important thing was for them to ensure that all students in the group knew how to answer the questions.
- After this time, students were instructed to turn their desks to sit in rows and were given a quiz containing five questions, with two blanks for each question.
- Because students were not expected to learn much reading and writing at this level, the spelling for the answers was provided on the board (students had to choose from a long list of possible correct answers).
- After completion, the quizzes were graded by members of another team.
- Teams were given back their quizzes and improvement and team scores were calculated.
- The teachers made a deliberate attempt to provide extra praise to students and teams that showed marked improvement (particularly low performing students and teams) to influence self-esteem and motivation.
- Immediately following the class, all “Super Teams” had their team photos displayed on the Super Team bulletin board until the next STAD quiz. It quickly became clear that students enjoyed this recognition and could regularly be seen crowding around the board between classes.

Control group:

- The control group consisted of seven classes of grade five students. The size and heterogeneity of these classes was similar to that of the sixth grade classes. These students, however, had been exposed to English in the school for one year less than the grade six students. They followed a similar textbook (same company and format) and schedule (two forty minute classes a week with two weeks on each chapter) as the sixth grade students.
- The fifth grade students had already been divided into groups of four-five students by the Korean English teacher, but were equally divided according to gender only. Each group generally consisted of two boys and two girls who were placed in the group according to their student number order in the class. All boys have the lower numbers from 1-20 and girls have the higher numbers from 31-50. Groups were typically divided in the following manner:
 - **Group 1:** (1,2,31,32); **Group 2:** (3,4,33,34); **Group 3:** (5,6,35,36); and so forth.
- Any mixed ability groupings that may have occurred would have been through chance only, since students are randomly assigned their number at the beginning of the year, and the numbers have no relation to their grade in the class.
- Six classes were taught with one grade five Korean English teacher and one class was taught together with the students’ homeroom teacher.
- The starting grades were determined by these teachers and they calculated the scores for all grade five students based on subjective data from students’ performance during the first semester. These grades were calculated to determine academic achievement only. They were not used when dividing students into

- teams. The criteria used to determine students' pretest grades was basically the same for all teachers, but since the fifth and sixth grade teachers were not the same, it is possible that there was some inconsistency between them.
- These students were also given a quiz containing five questions with two blanks for each question at the end of each lesson, but were not given any practice quiz or time to practice.
 - Additionally, these students were provided with no training in how to work with group mates.
 - At the end of each quiz, students recorded the quiz score for each student in the group.
 - No rewards were given for performance on the quizzes. This effectively eliminated the crucial CL factor of positive interdependence.
 - Students were, however rewarded stickers for their teams, but these stickers were not related to performance on quizzes. More stickers were given to teams who performed the best or who participated the most each class.
 - So, although students did work in groups, the design of the class was more competitive than cooperative in many ways since groups were competing for stickers, with only one group getting the maximum number of stickers.

Surveys:

- The surveys given to students during the pretest and posttest were designed by researcher and contained a total of twenty-five questions, divided in three categories to measure changes in exposure to English outside of the classroom, changes in attitudes towards learning English and changes in attitudes towards cooperative learning.
- Additionally, all students' grades were recorded on the surveys for the purpose of measuring changes in academic achievement during the period between the pretest and the posttest.
- Prior to completion the surveys were translated into Korean and tested three different times with sample groups of about ten grades five and six students each time.
- Students were asked to repeat back what they thought the questions were asking and any confusing wording was changed to make the questions as understandable as possible to all students.
- During survey administering, both the researcher (Canadian English teacher) and Korean English teacher were present to ensure that there was no confusion.
- Students received a Korean version of the twenty-five questions below:

Part one: Exposure to English outside of school:

	1-2	3-4	5-6	More than
Never	hrs/wk	hrs/wk	hrs/wk	6 hrs/wk

1.1 study English outside of the school English class

1.1 attend a language Institute

- 2.I learn English with a tutor in my home
- 3.I learn English using tapes or videos
- 4.I study English as an extracurricular activity in the school
- 5.I study English using the internet
- 6.I practice English at home with parents or siblings

Part 2: Attitudes toward learning English

- | | | | |
|--|----------|-----------|-------|
| | Disagree | Uncertain | Agree |
| 7. I love learning English | | | |
| 8. English class is fun | | | |
| 9.I learn a lot in English class | | | |
| 10.Learning English is important | | | |
| 11.English class is boring | | | |
| 12.I feel confident about my English ability | | | |
| 13.I don't like to speak English in class | | | |

Part 3: Attitudes towards cooperative learning

- | | | | |
|---|----------|-----------|-------|
| | Disagree | Uncertain | Agree |
| 15. I like to work with other students in English class | | | |
| 16. I prefer to work alone | | | |
| 17. I get many good ideas by working with others | | | |
| 18. I help other students with their English | | | |
| 19. Other students help me with my English | | | |
| 20. I feel I contribute a lot when working in groups | | | |
| 21. Other students like to work with me | | | |
| 22. It's not fair for teachers to give all students in the group the same grade. | | | |
| 23. I like to work with students who are the same level in English as me. | | | |
| 24. It's good to work with students who are not the same level in English as me | | | |
| 25. Students should get rewards for trying hard rather than just getting a high grade | | | |

Data Analysis:

- The researcher recoded three items in the attitudes survey.
- Each of the three attitudes scales was subjected to exploratory factor analysis (principal axis with varimax rotation) and to reliability procedures.
- The research questions were addressed through General Linear Modeling using SPSS.
- The dependent variables were posttest achievement and posttest attitudes; the independent variable was experimental condition (treatment or control); and the covariates were pretest achievement and pretest attitudes.

Results

Survey Scale Reliability:

- In the first step in the reliability procedure the researcher examined the reliability of all 25 items, producing Cronbach's $\alpha = .61$.
- Since this was below the .70 criterion, each of the surveys was in turn examined using exploratory factor analysis and Reliability.
- The exploratory factor analysis was unsuccessful but the serial application of Reliability produced three usable scales.

- **Exposure to English outside of the class (1-7)**
- This was not reliable when all seven items were included. Using the item-total correlations output in a serial analysis procedure (i.e., items correlating less than .30 with the sum of the remaining items were removed), the best result was obtained when two items were retained (01 and 02).
 - Pretest $\alpha = .80$; Number = 491 students.
 - Posttest $\alpha = .83$; Number = 491

- The criterion is .70 so the survey was highly reliable for this part.

- **Attitudes towards learning English (8-14):**
- All seven items were retained.
 - Pretest $\alpha = .78$; Number = 468 students.
 - Posttest $\alpha = .78$; Number = 468 students.

- This section of the survey can also said to be reliable.

- **Attitudes towards cooperative learning (15-25):**
- All eleven items were retained.
 - Pretest $\alpha = .68$; Number = 475 students.
 - Posttest $\alpha = .67$; Number = 472 students.

- This section was slightly below the criterion of .70 so it was marginally reliable.

- The correlation matrix found that attitudes to learning ESL (items 08-14) significantly predicted posttest achievement while the other attitude measures did not.

- Consequently, attitudes to ESL was included in the GLM, as both a covariate and an outcome measure.
- Table 1 shows the means and standard deviations for each group on each measure.

Table 1:

Effects of treatment on student achievement and attitudes to ESL:

- The multivariate effect (i.e., combined effect of the treatment on both outcome variables) was significant [$F(2,426)=34.034, p<.001$] accounting for 14% of the variance in both outcomes.
- Pretest achievement also had a significant effect [$F(2,426)=144.972, p<.001$] accounting for 41% of the variance; as did pretest attitudes to ESL [$F(2,426)=173.721, p<.001$] accounting for 45% of the variance.
- The univariate effects of the program were also statistically significant.
- **For posttest student achievement:**
 - Pretest achievement was significant [$F(1,431)=290.455, p<.001, \eta^2=.41$]
 - Pretest attitudes to ESL was significant [$F(1,431)=11.139, p=.001, \eta^2=.03$]
 - Treatment was significant [$F(1,431)=58.740, p<.001, \eta^2=.121$]
- Therefore, the treatment had a significant effect on student achievement after the effects of pretest differences in achievement and attitudes to ESL were controlled.
- Pretest achievement was a powerful predictor of posttest achievement, while the effect of pretest attitudes was minimal, as you would expect.
- **For posttest attitudes toward ESL:**
 - pretest achievement was significant [$F(1,431)=4.910, p<.027, \eta^2=.11$]
 - pretest attitudes to ESL was significant [$F(1,431)=348.037, p<.001, \eta^2=.45$]
 - treatment was significant [$F(1,431)=17.836, p<.001, \eta^2=.04$]
- Therefore, the treatment had a significant effect on student attitudes toward ESL after the effects of pretest differences in achievement and attitudes to ESL were controlled.
- Pretest achievement was a weak predictor of posttest attitudes, while the effect of pretest attitudes was very large, as you would expect.
- The effect of the program was greater for achievement (12% of the variance) than for attitudes to ESL (4% of the variance).

- In summary, the study found produced clear answers to the research questions of the impact of STAD on attitudes toward learning English and effects of STAD on achievement.
- Although the results were not as strong for the question of the impact of STAD on attitudes towards cooperative learning, they did prove marginally reliable.

Potential Limitations of the study:

Time Constraints:

- In grades five and six, students only receive English for two forty minute classes each week and the researcher was only able to visit each class once a week for a total of about nine weeks (sometimes less in the case of holidays and class cancellations).
- The curriculum mandates that students complete one chapter of the textbook every two weeks, making it impossible to follow the recommendations of the STAD model as set out by Slavin (1994, 1995). He suggested having one or two teacher led classes, followed by one or two classes where students work in groups, followed by individual tests.
- Because of the time constraints, students were provided with three teacher led classes (two of which were with the Korean English teacher alone and one with both the Korean English teacher and the native speaker of English).
- After students finished each chapter, they were given two practice quizzes for each group and just fifteen-twenty minutes to work together. This is far less time that would be preferred to implement STAD more effectively.
- Additionally, students were only placed in the STAD groups during the English class and generally worked in different groups in other classes. This reduced the time students had to develop group bonds.
- They were, however, given some instruction about how to give and receive help while working in groups to practice for the quiz. Group interaction was regularly monitored by both teachers and help was provided when needed.

Experimental group and Control group not identical:

- STAD was used with all grade six classes and all grade five classes were taught in a more traditional way (although they did work in groups).
- All factors between the two groups are the same except for the age and grade level.
- Additionally, both grades were tested on different content, and it may be possible that this factor could have influenced how students performed on tests. The tests were, however, designed and administered by the researcher for both grades, and efforts were made to ensure consistency.

Different Korean English teachers for two groups of students:

- All of the grade six students were taught by one Korean English teacher and the grade five students were taught by two different teachers (Six classes with one teacher and one with another).
- Additionally, the regular grade five teacher went on maternity leave three weeks prior to the completion of the study and a new teacher came.
- The researcher, however attended all classes once each week, so saw all of the students in the study for a relatively equal amount of time.
- The different Korean English teachers had different teaching styles and, it is difficult to know whether or not this could have influenced important factors in the study such as academic achievement, motivation, or liking of the subject.
- The fact that there were two teachers also meant that the base scores given prior to the start of the study, may have been calculated in different ways. Because there is no formal assessment of students in English at the elementary school level, teachers relied on highly subjective methods to calculate base scores. This should not have been a major problem, however, since Slavin's procedures focus less on a perfect measurement of base scores and more on the appearance of fairness. The important issue here is whether the grade 5 pretest score was comparable to the grade 6 pretest score and whether the posttests were comparable between the grades.

Exposure to a Native Speaker of English:

- When students were given the pre-test questionnaire, they had not yet experienced more than just one or two classes with the native speaker of English.
- It may be possible that this exposure, rather than the exposure to STAD, could have impacted student motivation and liking of English.
- However, because all students in both grades were given the same exposure, the effects of this should be balanced between the two groups.

Recommendations for future research on STAD in an EFL context:

Although this study did suggest that STAD had positive effects on achievement, attitudes towards learning English, and attitudes towards working cooperatively, these results could likely be enhanced. The positive effects found may be strengthened by implementing STAD more widely in middle and high school English classes where formal assessment is entrenched; by providing students with more time and opportunities for STAD; and by providing teachers with the training and support needed to effectively implement STAD.

Implementing in middle and high schools:

- In this study STAD was used with grade six elementary school students learning English as a Foreign language.
- Elementary school students are not given formal assessment in English and STAD may work better where testing is more embedded into the curriculum itself.

- Additionally, elementary school students are taught limited reading and writing skills in the EFL curriculum and STAD is more adaptable to environments where these skills are given more weight, since the STAD quizzes are generally written quizzes.
- Given that the study did show positive effects in an environment where formal assessment and writing skills are limited, it would be expected that the effects would be much stronger in those learning environments where formalized assessment and writing skills are given more weight.
- The foreign language curriculum in middle and high schools does place a much greater emphasis on these, and thus, STAD should prove more beneficial for these students.
- The English curriculum in Korea (Seventh Curriculum) attempts to draw a balance between communicative, student centered approaches with the demands of a test centered curriculum.
- STAD may prove to be the key to achieving this balance since it promotes both cooperative learning with regular written testing to ensure comprehension.

More time and Opportunities for STAD:

- This study was conducted for a period of just two months (nine weeks) in an environment where students received English classes for just two forty minute classes each week.
- Although this duration may have been sufficient for the purposes of the research study (9 weeks X 2 classes = 18 STAD sessions versus Slavin's recommendation of 4 weeks X 3-5 classes = 12-15 sessions), it may be more beneficial to students' learning to experience STAD for a more extended period.
- In addition, there was pressure to complete a textbook chapter every two weeks. This made it very difficult to implement STAD as it was set out by Slavin (1994, 1995).
- One way teachers could expand the amount of time students are exposed to STAD would be to implement it in the English language class for a full year, to allow time for the positive effects to become more noticeable.
- Another, and likely more effective approach, would be to adopt STAD across a wide range of subjects and not just English class alone.
- When cooperative learning approaches like STAD become entrenched into the school learning culture as a whole, it will become more natural for students.
- It is not easy to adopt cooperative learning strategies like STAD in one small corner of the overall curriculum (English as a Foreign Language) while the other areas of the curriculum remain highly competitive and teacher-centered.
- The key is to change the educational culture as a whole so that cooperative learning becomes the norm for all students in all subjects.
- The effects of doing so would undoubtedly have ripple effects beyond the walls of the school itself, encouraging cooperative interaction in all spheres of life.

Provide teachers with training and Support:

- It is essential that teachers be given intensive training on how to implement STAD and the benefits of doing so, before attempting to make it part of the curriculum. This was done with the grade six Korean English teacher in this study and led to positive attitudes regarding the approach by the teacher. Additionally, the researcher co-taught with this teacher throughout the study, ensuring that STAD was being implemented effectively.
- This needs to be complemented with support networks and ready made materials to increase the likelihood that all teachers will adopt this approach to teaching and learning.
- One of the key challenges for teachers, not only in Korea, but in many educational environments, is adopting such approaches in rigidly hierarchal environments where decisions are often made by administrators whose primary interest may not be the teachers or students themselves.
- Implementing Cooperative learning approaches like STAD on a large scale takes serious commitment and resources. Without these, such approaches – regardless of their track record of success – will be doomed to failure.

Conclusions:

Although this study was limited in duration and scope, the results clearly support earlier research on cooperative learning and STAD which found that it accelerates academic achievement as well as having positive effects on important non-academic factors such as motivation, liking of school and working with others in cooperative learning groups. Cooperative learning strategies like STAD are supported by a multiplicity of theories from a variety of academic disciplines – including Psychological theories of motivation, social cohesion, individual and cognitive development as well as Sociocultural Theory, Cognitive Apprenticeship, Situated Cognition and Communities of Practice. STAD is also supported by a large body of empirical research across different time periods, subjects, age levels, and geographical locations and has consistently found a variety of positive outcomes – including accelerated academic achievement and proacademic norms, increased group cohesiveness, improved social skills, increased self-esteem, liking of others and feeling liked, acceptance of mainstreamed students, internal locus of control, increased time on task and improved classroom behavior. As this study has demonstrated, simply putting students in groups does not guarantee positive results. Teachers cannot simply place students together and expect them to work well with each other. Central components of effective cooperative learning must be in place so that students can come to feel that they are positive contributors, not only to their teams, but to the class as a whole. Most teachers are faced with large heterogeneous classes, making it difficult to serve the needs of all students in the class. Cooperative learning approaches like STAD, take advantage of this heterogeneity, by encouraging students to learn from one another and from more and less knowledgeable peers. The bonds developed in this process can lead to increased understanding and acceptance of all members of society, a benefit of cooperative learning which extends well beyond the walls of the school itself.

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APPENDIX

학생조사표

학교명 _____

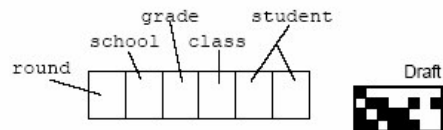
학생번호: _____

성별: 남 ○ 여 ○

문제를 읽고 자신의 생각을 동그라미에 꼭 체크해주세요.(동그라미를 강게 색칠하세요) 꼭 연필로만 칠해주세요.(볼펜, 싸이펜, 칼라펜 절대 사용하면 안됨) 종이는 절대 접으면 안되고, 동그라미외에는 연필사용을 하면 안됨



	이니오	일주일 1~2시간	일주일 3~4시간	일주일 5~6시간	일주일 6시간이상
1. 학교외에서 영어공부를 한다.	○	○	○	○	○
2. 영어학원에 간다.	○	○	○	○	○
3. 과외를 받는다.	○	○	○	○	○
4. 테이프, CD, 비디오를 영어공부에 이용한다.	○	○	○	○	○
5. 학교에서 수업이외에 영어수업을 받는다	○	○	○	○	○
6. 인터넷을 영어공부에 이용한다.	○	○	○	○	○
7. 가족과 함께 영어연습을 한다.	○	○	○	○	○
8. 영어를 배우는 것을 너무 좋아한다.	○	○	○	○	○
9. 영어수업이 재미있다	○	○	○	○	○
10. 영어수업을 통해 많이 배운다	○	○	○	○	○
11. 영어를 배우는 것은 중요하다	○	○	○	○	○
12. 영어수업이 지루하다	○	○	○	○	○
13. 나는 영어에 자신있다	○	○	○	○	○
14. 수업시간에 영어로 말하는 것을 싫어한다.	○	○	○	○	○
15. 영어수업을 다른 학생들과 하는 것이 좋다	○	○	○	○	○
16. 혼자 영어 공부하는 것이 좋다	○	○	○	○	○
17. 다른 학생과 수업하는 것이 더 많은 것을 배운다	○	○	○	○	○
18. 영어수업할 때 내가 친구들한테 도움을 준다	○	○	○	○	○
19. 영어수업할 때 친구들이 나한테 도움을 준다	○	○	○	○	○
20. 그룹으로 할 때 내가 도움을 준다	○	○	○	○	○
21. 다른 학생들은 나와 수업하는 것을 좋아한다	○	○	○	○	○
22. 그룹의 모든 학생들에게 같은 점수를 주는 건 공정하지 못하다	○	○	○	○	○
23. 영어수업할 때 같은 수준의 학생들과 공부하는 것이 좋다	○	○	○	○	○
24. 영어수업할 때 다른 수준의 학생들과 공부하는 것이 좋다	○	○	○	○	○
25. 점수를 잘받기 위해 보상받는 것보다 성적 이 향상될 때 상을 받는 것이 더 좋다	○	○	○	○	○



(Korean version of survey)

Team Name : _____

Date: Les: Date: Les: Date: Les:

Names	Base Score	Quiz %	Points	Quiz %	Points	Quiz %	Points
Team Score							
Team Ranking <i>(Super, Great, Good)</i>							

Base Score = Your % in the class

Points:

100% = 30
More than 10% above base = 30
Base to 10% above = 20
1% to -10% from base = 10
More than 10% below base = 5

Team Score = Total points divided by number of students in group

Team Ranking:

25 – 30 points = SUPER TEAM
20-24 points = GREAT TEAM
Less than 20 = GOOD TEAM

(Team Score sheets)