1993

Cooperative learning and second language acquisition: Parallels for success in the regular classroom

Lisa Ann Lindberg

COOPERATIVE LEARNING
AND SECOND LANGUAGE ACQUISITION:
PARALLELS FOR SUCCESS IN THE REGULAR CLASSROOM

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education: English as a Second Language

---

by

Lisa Ann Lindberg

June 1993

COOPERATIVE LEARNING AND SECOND LANGUAGE ACQUISITION: PARALLELS FOR SUCCESS IN THE REGULAR CLASSROOM

A Project

Presented to the

Faculty of

California State University,

San Bernardino

---

by

Lisa Ann Lindberg

June 1993

Approved by:

[redacted]

Dr. Kathyrn Z. Weed, First Reader — 6/11/93 Date

[redacted]

Dr. Lynne Diaz-Rico, Second Reader — 6/11/93 Date

Cooperative Learning and Second Language Acquisition:
Parallels For Success in the Regular Classroom

Lisa A. Lindberg
California State University, San Bernardino, 1993

Statement of the Problem

The purpose of this paper was to examine the parallels between the theories of cooperative learning and second language acquisition. Fieldwork study was conducted in the writer's second grade classroom in which cooperative learning took place. In addition, studies were examined and researched that lent support to the theory that cooperative learning can aid in successful language acquisition.

Procedure

The fieldwork was conducted over a four week period of time. Ten Limited English Proficient (LEP) students were observed for five minute periods and the number of utterances was recorded by tally. Following these observations, individual interviews were conducted with the ten LEP students. The students' comments on cooperative learning were recorded and analyzed with the observation data.

Results

The results indicated that a majority of the students did the most

talking when they were placed in a leadership role within the cooperative learning group. In addition, the students reflected on many positive aspects of cooperative learning as well as the drawbacks. The students' answers seemed to support the theory that a cooperative group situation fosters an optimal context for language acquisition.

Implications

This writer found that cooperative learning provided an excellent context for language acquisition. This theory was supported with research and the writer's own fieldwork observations. This research is important when one considers the needs of the language minority student in the regular classroom.

Acknowledgements

The writer would like to thank Dr. Kathy Weed and Dr. Lynne Diaz-Rico for their guidance during this endeavor. Also a special thanks to my dear friend RaNae Voskuhl for her support, humor and encouragement the past two years.

Table of Contents

Introduction

In 1989 there were more than 375,000 limited English proficient students in California public schools. In addition there were 433,000 students of fluent English proficiency who had a home language other than English. The total of California's language minority student population reached over 800,000. (Dolson, 1989). The Los Angeles Times reported that "in the 1991-92 school year, almost 20% of California's 5 million public school students... were classified as having limited English Proficiency, and 34% of all students came from homes where English was not the primary language" (Merl, 1993). Those numbers are continuing to increase and there is still considerable debate about the education of language minority students. Regardless of the debates for or against bilingual education, the best programs to implement or the approaches to use in the classroom, this so-called "problem" cannot be ignored. Every child has a right to a quality education in the United States and to experience a significant degree of success in the classroom setting. Providing the best opportunities for success is what all teachers strive for. The problem is that teachers are increasingly faced with a dilemma in providing the best program for all of their students. With an increasingly diverse student population representing various languages, cultures, abilities and socioeconomic

backgrounds, the "best program" for all is very hard to determine. Nevertheless, this paper will attempt to demonstrate the potential for success for all students using a framework of cooperative learning and theory behind second language acquisition.

As the title of this paper suggests, there is a chance for success for the language minority student in the regular classroom. When I say "the regular classroom" I am referring to a classroom in which the medium of communication is English and many of the students are native English speakers. For the purpose of this paper, success for the language minority student will be defined as 1) obtaining high levels of English proficiency, 2) developing appropriate levels of cognitive and academic skills and 3) experiencing a positive psychological adjustment to school and society in general. (Holt &Tempes, 1982).

I believe cooperative learning can provide the best contexts for language minority students. Increasingly the objectives for English as a Second Language (ESL) have focused on the communicative function of language. "If we compare the literature on communicative curriculum design and the literature on cooperative learning, we begin to see some striking parallels." (Kessler, 1992. p.38). I will discuss these parallels and the opportunities for success that cooperative learning provides. Next there will be a brief overview of second language acquisition theory with the remaining part of the paper concentrating on combining theory with practice. Finally I will provide an analysis of

the formal studies that support the concept and theory of cooperative learning. Included in this analysis will be a qualitative study of language minority students in a regular second grade classroom. The classroom is the writer's own and the analysis will lend support to cooperative learning and the success of language minority students.

REVIEW OF THE LITERATURE

This section of the paper will explain the theory of second language acquisition developed by Krashen and the theory behind cooperative learning. There will also be a review of specific case studies related to cooperative learning. I will begin with the second language acquisition theory.

Second Language Acquisition Theory

One second language acquisition theory includes five hypotheses developed by Stephen D. Krashen. The following is a description of each hypothesis and how each affects the acquisition of a second language.

The Acquisition-Learning Hypothesis

There are two ways of developing a second language. One way is through a natural means of acquisition, much in the same way people

develop their first language. The second way is actually learning the language through formal study of the rules and grammar of the language and repeated error correction. "In everyday terms, acquisition is picking up a language. Ordinary equivalents for learning include grammar and rules." (Krashen, 1981, p.56). This paper will concentrate on the acquisition aspect of this first hypothesis.

The Natural Order Hypothesis

According to this hypothesis, language is acquired in a predictable order that is similar to the acquisition of the first language. The order is not identical and often involves individual variation. The "existence of the natural order does not imply that we should teach" to this order but rather focus on providing a rich language background and getting the message across" (Krashen, 1981, p.57).

The Monitor Hypothesis

This hypothesis describes the relationship between acquisition and learning that was described earlier. Once a language is acquired, fluency is developed. The Monitor acts as an editor when we speak or write. In order to utilize the Monitor three conditions must be present: 1) There must be sufficient time to recognize and correct the error

made. 2) The focus is on form or the correct usage of the language. 3) There must be adequate knowledge of the rules of grammar in order to apply them. In short we use the Monitor and "conscious learning to make corrections, to change the output of the acquired system before we speak or write, or sometimes after we speak or write (as in self correction)" (Krashen, 1981,p.57).

The Comprehensible Input Hypothesis

Krashen developed this construct to describe understandable and meaningful language directed at second language acquirers under optimal conditions. How does one acquire language? The Input Hypothesis postulates that the acquirer will understand language at a certain level (i) and can receive input at a level just beyond that current level of competence (i+1). Input is made comprehensible by a number of strategies. These strategies include (a) focus on communicative content rather than language forms; (b) frequent use of concrete contextual references; (c) lack of restrictions on the first language by second language acquirers; (d) careful grouping practices; (e) minimal overt language correction by teaching staff; and (f) provision of motivational situations. (Krashen, 1981). Thus when these optimal conditions are met the learner will comprehend what is said and acquisition will occur. Speech is not taught directly, but emerges on its

own.

The Input Hypothesis also stresses the importance of a silent period in which the acquirer engages in a listening stage to build up competence in the second language. This competence is strengthened with comprehensible input and when the acquirer is ready, speech will emerge. It is not necessary to plan grammatical structures to provide for i+1 input. Successful communication will occur when the acquirer understands the message. "If input is understood, and there is enough of it, i+1 is automatically provided" (Krashen, 1981, p.61).

The Affective Filter Hypothesis

This final hypothesis deals with three affective variables that determine the success of second language acquisition performance. They are: Anxiety levels, motivation and self-confidence. Most likely, students who are highly motivated, less anxious, and have high self-esteem will do better in second language acquisition. When these conditions are less than optimal, there is the emergence of an "affective filter". The affective filter is a construct that is affected by the variables of personality, motivation and anxiety levels. These variables work to either raise or lower the affective filter. When the filter is "high" the second language acquirer is not able to process comprehensible input. When the filter is "low" the conditions for understanding

comprehensible input and subsequent acquisition of the second language are much more optimal. According to this hypothesis, the presence of an affective filter acts as a mental block to the process of acquisition. This "affective filter hypothesis" sets the conditions for successful second language learning. (Krashen, 1981, p.62).

Considerations Before Implementation

Although Krashen provides the most comprehensive theory about language acquisition, he has received considerable criticism. Most of the criticism centers on methodology and the actual proof of his learning versus acquisition hypothesis, the role of the Monitor and his lack of an explanation for variability in language-learner language. (Ellis, 1985).

According to Ellis, the distinction that Krashen makes between acquisition and learning is defined in terms of the "subconscious" and the "conscious" and cannot be open to investigation through empirical study. Since the acquisition-learning hypothesis cannot be proven, the methodology is questioned. Ellis also believes Krashen fails to prove that learning and acquisition are entirely separate. Krashen's theory has been challenged "on the basis that when 'learnt' knowledge is automized through practice it becomes 'acquired' i.e. available for use in spontaneous conversation" (Ellis,1985, p. 264).

The role of the Monitor has been criticized for methodological reasons also. "The only evidence for Monitoring lies in the language user's own account of trying to apply explicit rules" (Ellis, 1985, p.265). In addition the Monitor, as explained by Krashen, only refers to production and does not take into account the reception of utterances. "Krashen does not give any consideration to Monitoring as a collaborative activity involving both the learner and the interlocutor" (Ellis, 1985, p. 265). This particular criticism is noteworthy, especially when drawing together the parallels of second language acquisition and cooperative learning. If Monitoring is viewed as a collaborative activity between the language acquirers and their interlocutors, cooperative learning plays an even more significant role in language acquisition. Krashen's Monitor theory could be expanded further to include a concept I refer to as guardian speech. I have seen this type of speech in my own classroom where a Non-English Proficient (NEP) student will attempt to speak as long as their "guardian" or "monitor" is there to help them along.

A final criticism of Krashen's theory is his perceived failure to assign a significant place for the role of *comprehensible output*. Ellis (1985) examines this criticism in detail. According to Ellis, output is important in several aspects that Krashen fails to recognize: (1) the learner may be forced to use alternative means to express a message during a communication breakdown; (2) using the language may force

the learner to move from semantic processing to syntactic processing; and (3) the learner can test out hypotheses about the second language. Ellis uses this argument to state that "comprehensible input may not be either necessary or sufficient" for acquisition to take place. (p.159). The emphasis for acquisition is placed more on output as opposed to input. Indeed, many second language acquisition theorists believe output produced by the learner can play a substantial part in the acquisition process, "It not only aids in receiving comprehensible input, it offers opportunities for practice and appears to be an important means for testing hypotheses" about the target language. (Richard-Amato, 1988, p.42). Krashen (1988) believes output makes a more indirect contribution to language acquisition: "Simply, the more you talk, the more people will talk to you!" (p. 332). This indirect contribution of speech enables the learner to obtain comprehensible input. Native speakers will adjust their input according to the fluency level of the language acquirer. Krashen believes the role of output plays a more significant role in *language learning*. "Output aids learning because it provides a domain for error correction" (p. 332). When the speaker makes an error, the error can be corrected and internalized as a language rule. Regardless of the indirect or direct role of output in second language acquisition, both sides seem to agree that it can have an affect. This distinction is important when drawing together the theories of second language acquisition and cooperative learning.

Cooperative learning plays a significant role on output as well as input, since interaction occurs when there is communication between two or more people.

Krashen's theory may be slightly flawed, but he does offer a well-defined starting point for the study of language acquisition. For the express purpose of this paper, I will use his theories to draw the parallels between second language acquisition and cooperative learning.

The Theory Behind Cooperative Learning

Cooperation and Interaction

"Working together has always made the pathway to success significantly easier. The idea that people working cooperatively toward a common goal can accomplish more than people working by themselves is a well-established principle of social psychology." (Dick, 1991). Although this may be so, our schools have not focused on that fundamental principle of cooperation. There is often an underlying current of individuality and an all out competition between students. This underlying current of individuality and competition takes place

within a broader cooperative framework. "Over 90% of all human interaction is cooperative!" (Johnson & Johnson, 1975, p.14). There needs to be some sort of cooperation in order to communicate and agree on ideas. This may be a nonconscious goal of interaction, but nonetheless it is still a goal. According to Johnson & Johnson (1975), "cooperation is basic to all human interaction and provides the context for competition and individualization." With this in mind, let us examine the goal structures of cooperative learning as they relate to interpersonal processes, cognitive outcomes, and affective outcomes. From this point of view, cooperation will be seen as having distinct advantages over a competitive or individualistic goal structure.

Interpersonal Processes

Johnson & Johnson (1975) use the term "climate" to refer to the patterns of interaction among students in the classroom. Since this term reminds me of a classroom climate or atmosphere, as in the actual physical surroundings (i.e. bulletin boards, desk arrangement, etc.), I prefer the more recent term "context" to describe these patterns and will refer to the "social contexts" of the classroom frequently in the remainder of this paper.

Numerous studies have been done by Johnson & Johnson that demonstrate the outcomes of cooperative learning. There is more

facilitative and encouraging interaction among the students in this social context than in competitive or individualistic learning situations. (Kagan, 1989). These studies have shown that by working and interacting with each other, students develop effective communication skills and appropriate behavior skills such as sharing, willingness to help, and empathy. According to Kagan (1986), there are three major problems facing the educational system of the United States:

1) Failure to educate and graduate minority students.

2) Failure to create positive race relations among students.

3) Failure to socialize students toward prosocial values.

Cooperative learning addresses all three of these problems. The prosocial values of problem number three include behaviors such as respect, caring, and a knowledge of when and how to cooperate and help others. In contrast to a competitive or individual structuring of the classroom, a cooperative social context fosters communication and a coordination of effort to achieve the desired outcome. No one is left to achieve by themselves and the distrustful feelings and potential frustration of individual competition is gone. The chart in Appendix A illustrates the goal structures and interpersonal processes involved in the classroom social contexts. Cooperative learning demonstrates a positive affect on prosocial values.

Cognitive Achievement

One of the arguments against cooperative learning is the misconstrued notion that children will simply copy the work of their peers or imitate their actions without really internalizing knowledge or specific concepts. But imitating itself is not a mechanical activity. As Vygotsky (1986) states: "To imitate, it is necessary to possess the means of stepping from something one knows to something new. With assistance, every child can do more than he can by himself--though only within the limits set by the state of his development." (p. 187). Could this be a variation of Krashen's i+1? The parallels are beginning to form and will be discussed later in this paper.

Vygotsky developed the concept of the "zone of proximal development" to describe the difference between a child's actual mental age and the level of achievement he attains with assistance. This is his demonstrated potential and instruction must be geared to the future, not stagnated in the past or mired in the present. "What the child can do in cooperation today he can do alone tomorrow." (Vygotsky, 1986, p. 188). Indeed, academic "skills are conceived as outcomes of participation in shared practices, and they are seen as developing in response to increased responsibilities on the part of the individual for the success of those practices." (Saljo, 1991, p. 72).

Slavin (1989) writes of "two essential features" for student achievement in cooperative learning. 1)The group goals must depend on positive interdependence between all members and 2) there must be some form of individual accountability. "Success must depend on the individual learning of all group members." (p. 52).

The chart from Johnson & Johnson (See Appendix B) clearly defines the various cognitive outcomes supported by the previously mentioned scholars. The competitive structure is considered effective with speed drill activities and practice with skills learned in a cooperative or individualistic goal structure. Competitive skills such as sportsmanship and comparing oneself to another may also be learned in this context. Within the context of an individualistic structure, skills such as self-monitoring or mechanical skills in a programmed learning format would best be accomplished individually. All other cognitive outcomes such as problem-solving and verbal abilities are listed as being much more successful within the cooperative social context of the classroom. This is not to say that there is no place for individual or competitive structures within the classroom, but that a cooperative structure provides more options for ensuring academic success.

The Affective Domain

The last goal structure of cooperative learning involves the affective outcomes of students participating in a communicative social context. According to this structure there is more of an opportunity to foster positive attitudes and values through the heterogeneous grouping of students involved in a cooperative activity. (See Chart in Appendix C). "Cooperative learning methods have been found to have strong and consistent positive effects on such outcomes as race relations, attitudes toward academically handicapped classmates, self-esteem, and predisposition to cooperate in other settings." (Slavin, 1983, p.431).

In a competitive or individualistic goal structure, the task and the incentive is centered on one person. Individuals must compete with others in order to achieve success. This context often fosters feelings of distrust, anxiety, selfishness or superiority relative to others. In cooperative learning, there is always a cooperative task structure with the option of individual incentives or whole group incentives. Group rewards with individual accountability are found to be the most successful cooperative learning groups. (Slavin, 1983).

Putting Together Theory and Practice

The Parallels

As stated before, the parallels between second language acquisition theory and cooperative learning are numerous. I will attempt to draw attention to these parallels in order to point out the extreme value of cooperative learning with language minority students in the regular classroom. Although the benefits focus mainly on language minority students, there is value for all students in the classroom whether they be native English speakers, fluent English proficiency, limited English proficiency, or non English speakers.

The practical application of Krashen's theory is to provide comprehensible input that is interesting and relevant to the participants. The goal of this input is to convey messages of interest, not to provide practice in correct grammar usage. In order for comprehensible input to be processed successfully by the learner the communicative context must be optimal. The affective variables such as anxiety, motivation and self-confidence all play a part in second language acquisition. When conditions are optimal, the context is set

for acquisition and the development of tools for conversational management.

Directly related to this practical application of Krashen's theory are the goal structures of cooperative learning. Interpersonal processes focus on high interaction with high acceptance and support for all group members. This interaction in a small group setting would provide a rich language background with a focus on getting the message across to all group members involved in positive interdependence to achieve a cooperative goal. The importance of "getting the message across to all group members" is essential in cooperative learning. Similarly, the idea of "providing comprehensible input" is essential to language acquisition. The principle is the same: Communicate for mutual understanding. The interaction that takes place in cooperative learning demands the contribution of all group members. The opportunity for great quantities of comprehensible input is there as well as significant output. There are also high levels of sharing and helping within the cooperative group. The parallel between the concept of self-monitoring and the related guardian speech is evident here.

In regard to the cognitive outcomes of cooperative learning there is an awareness of one's capabilities and the subsequent use of these capabilities. I see a direct correlation between Krashen's concept of i+1 and the role of input/output in relation to being aware of one's

capabilities to achieve more cognitively and academically. "Knowledge is dynamic, changing and constructed within a social context." (Banks, p. 45, 1991).

Verbal abilities are enhanced within the goal structure of cognition in cooperative learning. As Judy (1980) states: "Use collaborative learning projects. Students can learn more than just editing from one another. Use collaborative projects as a way of helping students learn to share skills and ideas. Through working together students marshal their language abilities and show each other--informally, of course--how to employ those skills in a new setting." (p.127). When students collaborate on a project that is interesting and relevant to them it sets the context for optimal input.

The last parallel between second language acquisition theory and the goal structures of cooperative learning involves the affective domain. In simple terms the affective domain entails the emotions of the students and the outcomes of their learning. The Affective Filter prevents the smooth acquisition of language. Cooperative learning works to lower this filter or mental block. When students are in a context that provides high motivation, lowers the level of anxiety, and increases self-esteem, successful acquisition can take place. Cochran (1989) states that, "In addition to promoting learning, this system [cooperative learning structures] has been found to foster respect and friendship among heterogeneous groups of students." (p. 2). With the

influence of high trust, acceptance and support, sharing and helping and no comparison of one's self to others, the Affective Filter is lowered. (See Appendix A).The system allows students to experience a positive psychological adjustment to school and to society in general.

The Essential Elements

In order for cooperative learning to work affectively (and for language acquisition to take place) there are a number of essential elements that must be present. One of the first distinguishing elements is heterogeneous grouping. Students are divided into groups of two to six with varying ability levels and assigned roles for each member. The assignment of roles helps to accomplish the learning task and stresses interpersonal skills. Students can benefit from observation and shared interactions while the learning process is going on.

The second element to cooperative learning is the structure of the lessons. With a cooperative task structure and a cooperative incentive structure built into the lesson, there is the creation of positive interdependence among group members. This fosters a context of social interaction that is essential to learning and language acquisition. Wertsch (1991) quotes Mikhail Bakhtin in describing how meaning is obtained in group life: "My voice can mean, but only with others: at times in chorus, but at the best of times in dialogue." (p.68).

The third element involves the "identification and practice of specific social behaviors." (Cochran, 1991). Social behaviors are defined as those behaviors necessary for cooperation to succeed such as sharing and caring, encouraging fellow students and accepting responsibility for one's own learning as well as that of others. These behaviors need to be taught and practiced in order for cooperative learning to succeed in the classroom. When these social skills are utilized properly the optimal conditions for comprehensible input and language acquisition are also achieved.

The fourth element of cooperative learning involves task structure. It includes whole class wrap-up, individual testing and group recognition. A cooperative task structure that is based on group rewards with individual accountability offers the most success. A more detailed explanation of successful cooperative task structure is offered in the next section under Research by Slavin.

All of these elements combine to create a successful learning experience for all students. When used properly, cooperative learning provides a rich learning and language experience that fosters knowledge and language acquisition. By including all students in the learning process, one will enhance the cognitive, affective and interpersonal process outcomes that students will need to become positive, thinking members of a multicultural society.

Case Studies

Research by Cohen

Research on cooperative learning has consistently found that interaction is the source of learning in group work. The higher the percentage of students talking and working together, the greater the average learning gains. In classrooms using cooperative learning, the non-English speaking students can be placed in a group in which a bilingual student acts as a linguistic bridge. An ideal situation is created for language learning to occur simultaneously with the development of higher order thinking skills. The gains in English proficiency on the part of Spanish-speaking students as a result of this approach have been documented. (Cohen, 1990).

Researchers from Stanford University's Program for Complex Instruction have conducted several extensive studies on cooperative learning groups. One such study conducted by Cohen (1986) utilized the curricular materials, Finding Out/Descubrimiento (1985) developed by Edward De Avila and his associates for bilingual settings.

They analyzed two sets of data containing observational measures and test scores from linguistically and academically heterogeneous classrooms using the Finding Out/Descubrimiento

materials. The children in the sample were from lower socioeconomic family backgrounds and the classes contained a large percentage of Limited English Proficient students. Many were tested as "limited proficient" in both English and Spanish.

The first set of data was collected during the academic year 1982-83 for 15 classrooms in 10 schools. The second set was taken during the academic year 1984-85 for 13 classrooms in 5 schools. The grade levels involved were 2-6. Both teachers and students were observed in the study. The lateral communication of students was measured with an instrument called the whole-class instrument. The instrument is a grid which represents the groups and activities of the students in the classroom. The observer counts the number of students who are involved in the learning centers and the number of students who are talking about the task with each other or while manipulating materials.

The researchers found that very few students were disengaged from the cooperative learning activity. In 1982-83, it was an average of .5 child per classroom and in 1984-85, it was 1.2 children per classroom. There was a high rate of interaction in both sets of data. In the first set, an average of 31.43 percent of the children were observed talking and working together. The 1984-85 data also shows a high rate of interaction; the average rate of all peer task-related talking and working together per 3 minutes was 7.72. (Cohen, 1989, p. 84.).

The importance of cooperative learning in fostering interaction and therefore benefiting language acquisition is supported with these studies. In addition, statistically significant gains in achievement on standardized tests of reading and mathematics suggest a relationship to group learning in which students are involved in an interesting and meaningful context.

Research by Slavin

Slavin and associates conducted two studies to evaluate a comprehensive cooperative learning approach to elementary reading and writing instruction: Cooperative Integrated Reading and Composition (CIRC). The overall plan of the research was to develop a complex cooperative learning approach to instruction in reading and writing, to study its overall effects, and then to study components of the model to determine the unique contribution of each. (Slavin, Farnish, Madden, Stevens, 1987).

In Study 1 the subjects were 461 third- and fourth-grade students in 21 classes in a suburban Maryland school district. The 11 experimental classes in six schools were matched on California Achievement Test Total Reading scores with 10 classes in four control schools. In both groups the teachers volunteered for the 12-week study. The student populations of the school ranged from 6 to 29 percent

minority students (M=16.1%) and from 0 to 8 percent disadvantaged (M=3.3%). The control teachers continued using their traditional methods and curriculum materials. The experimental teachers were trained in the CIRC program.

The measures used in the study for statistical analysis were the standardized scores of Total Reading and Total Language scores from the California Achievement Test. These scores were transformed into z scores separately for each grade, so that data from both grades could be combined and used as pretest scores.

The results were derived from analyzing the adjusted pretest scores and using them as dependent variables in random-effects, nested analysis of variance (ANOVAs). Writing sample scores were analyzed in a similar fashion. Post-test analysis divided students into high, middle and low groups according to the sum of Total Reading and Total Language pretest scores. Individual-level ANOVAs were used with pretest and treatment as independent variables to determine the effect of treatment interactions.

Individual-level ANOVAs revealed statistically significant pretest differences on Total Language and on writing samples for mechanics. The differences favored the control group. No pretest difference was found on the Total Reading score variable. The results for the posttests at class-level ANOVAs found statistically significant differences favoring the experimental group in four of the five

standardized tests. Those tests included the Reading Comprehension, Reading Vocabulary, Language Expression, and Spelling test.

Study 2 was a replication of the first study with the exception of a longer 24 week study and a wider range of minority students (M=22.4%) and disadvantaged students (M=18.3%). On pretest scores of Total Reading and Total Language there were no statistically significant differences between the experimental group and the control groups. The results of the post-test again indicated a significant difference favoring the experimental group in class-level analysis for Reading Comprehension, Language Expression, and Language Mechanics, but not Reading Vocabulary.

The results of these two field experiments conducted by Slavin support the effectiveness of the CIRC program in producing significantly higher reading and language achievement for third- and fourth-grade students. The use of cooperative learning techniques seems to correlate with higher achievement of students as a whole. These studies would support the use of cooperative learning strategies in a classroom where there is a heterogeneous grouping of students that may include language minority children.

Numerous studies have been done on cooperative learning. Slavin examines several of these studies in his article "When Does Cooperative Learning Increase Student Achievement?" (Slavin, 1983). Slavin used three criteria to establish inclusion in the research: (1) A

cooperative learning method was compared to a control group that could be considered initially equivalent. (2) The study took place in regular elementary or secondary schools for at least two weeks. (3) Achievement measures fairly assessed learning in the experimental and control groups, and the tests used as dependent measures were given to individuals after the group experience.

Forty-six studies were examined. The achievement results indicate that of the 46 studies, 29 (63%) showed cooperative learning methods to have a statistically significant positive effect on student achievement ($p < .10$). No differences were found in 15 studies (33%) and 2 studies (4%) found statistically significant higher achievement levels for the control group ($p < .05$).

There is an important difference between the studies when they are broken down by achievement levels and the type of incentive and type of task (group study vs. task specialization). Achievement outcomes varied among group study methods depending on their use of rewards. Of the 27 studies using group study methods, 89% found positive effects when group rewards were given for individual learning. In contrast, group study methods that did not use group rewards found no positive effects.

A second ingredient found that what is apparently necessary for effective cooperative learning methods is individual accountability. This may be obtained by averaging learning performances or giving

each group member a unique task. Task specialization involves the latter method of accountability.

Of the 32 studies that used the combination factors of group rewards and individual accountability, 28 studies found significantly higher achievement for cooperative groups than for control groups. Only 1 of 14 studies that did not involve these factors found any positive effects for the experimental group.

In conclusion, the results of this research suggest that student achievement can be enhanced by using cooperative learning methods that use group study and group rewards for individual learning. In addition, maintaining high individual accountability may also have a positive influence on student achievement.

Group-Investigation vs. Whole-Class

Sharan and Shachar (1988) conducted a study to address some of the critical questions on the effect of cooperative learning. One of the questions addressed was: Do pupils study in classrooms conducted with the Group-Investigation method achieve more academically than pupils who study with the Whole-Class method and at what levels of knowledge? The Group-Investigation method was a cooperative learning technique implemented in the classrooms under study.

The Group-Investigation method was implemented in 5 eighth-

grade classrooms in a junior high school where two-thirds of the student body consisted of pupils from Jewish families who came to Israel from Western countries and one-third came from countries of the Middle-East. Four other eighth-grade classes in the same school were taught with the traditional Whole-Class method.

Two tests of academic achievement (one in History, one in Geography) were administered both before and after the experimental period. The achievement data were analyzed in several different ways. First class-level scores were used to determine if there were treatment effects above and beyond differences between classrooms (teachers). The analyses indicated a disordinal relationship between the mean scores from the Group-Investigation classes and the Whole-Class method classrooms. Pupils' individual scores were then used in a set of analyses of covariance where the father's education was the covariate and the pre- and post-test scores were the repeated measures. The third set of analyses had three treatment groups: The Group-Investigation method and the Whole-Class method whose teachers had participated in cooperative learning workshops and those who had not.

The analysis of the individual-level scores yielded statistics that were significant concerning interaction effects on low-level questions, on high-level questions of analysis and application, and on the Total score. The findings for the Low-level, High-level and Total scores also indicated a superior effect on History achievement when the father's

education is taken into consideration as the covariate. The final set of analyses dealt with the three groups: 1) Group-Investigation, 2) Whole-class with a cooperative learning workshop and 3) Whole-class with no workshop. The statistics for the interaction effects in History again yielded high results in Low-level, High-level and Total scores. The achievement scores in geography were similar.

The results of this study indicate a statistically significant level of academic achievement by the pupils who studied in the Group-Investigation compared to the Whole-Class method in both Geography and History, and on questions requiring low level (information) and high-level (analytical) answers. The significance of this study is important in that it offers further support for cooperative learning in the classroom and addresses the specific question of cooperative learning versus whole-class instruction.

Conclusion

Successful contexts for language minority students in the regular classroom depend on many factors. Cooperative learning is not a cure-all social context for every learning situation. It does however, offer a different learning context with strong support in research and second language acquisition theory. This paper will not attempt to describe the various cooperative learning approaches, (of which there

are many), but will merely try to tie various theories together to promote the potential of cooperative learning for all students in today's pluralistic classrooms. "Cooperation is the forest; competition and individualization are but the trees." (Johnson & Johnson, 1975).

Statement of Goals and Objectives

The goal of this paper was to determine the relationship of cooperative learning and second language acquisition. The first objective was to clearly define current theory on second language acquisition. The second objective was to explain the framework of cooperative learning. Finally, the third objective analyzed the relationship between cooperative learning goal structures and second language acquisition theory. This relationship was supported with research on current educational theory and practice as well as qualitative and quantitative case studies in the field.

Project Design

The design of this project was divided into two main parts. The first involved the research and study of cooperative learning and second language acquisition. The relationship between these two concepts defined the parallels of success for the language minority student. The second part of this project focused on various case studies that were researched by the writer and a field test conducted in a second grade classroom. The fieldwork involved ten language minority students and their participation in cooperative learning groups during a four week period of time. These students were defined as Limited English Proficient (LEP) as determined by the Spanish and English versions of the Initial Placement Test (IPT) and the Home Language Survey. The LEP students were in a regular classroom with both fluent non-native speakers of English and native speakers of English. The first language of all the LEP students was Spanish. The students worked in cooperative groups for four months and were familiar with the process of working together. Data was gathered on each student as he/she participated in the cooperative group activity.

The data was simple: 1) What assigned role was the student playing in the group and 2) the number of utterances the student made in a five minute period. (Indicated by tally).

The students' assigned roles in the group varied from week to week and included the leader, the organizer, the question person and the assistant. The researcher attempted to find when the student was more likely to participate verbally in the cooperative group activity. For example, when the student was assigned the leadership role was he/she more likely to speak than when he/she played the role of organizer. After the conclusion of the field test, an oral survey was conducted with each individual student to receive their input on cooperative learning and when the student felt the most "comfortable" with verbal interaction. Questions also elicited the students' response to cooperative learning as compared to individual learning or whole group instruction.

There were some limitations to this section of the project. First, the study of individual learners was not easy due to the many variables involved. It was difficult to distinguish variables related to cognitive style, personality, age or motivation. Also the collection of information through interviews with individual students posed some difficulties (Ellis, 1985). One of these was that the students may have said what they thought the interviewer wanted to hear, or "indulged in self-flattery". (p. 101). Another was that the interviews may have revealed

only those factors that the learner was consciously aware of. Nevertheless the interviews provided insight into the personal nature of language learning in a classroom that utilized cooperative learning.

FIELDWORK: Results and Analysis

The Study

As stated before in the project design, ten LEP students were observed over a four week period of time. During this four week period, there was a possibility of four different roles the students could play in their cooperative group. Each group had four students in it and was heterogeneously mixed by language and academic ability. The role each student was assigned lasted for the entire week of the cooperative group activities. The following week the roles were changed and so on until everyone had a chance to be in each role. The four roles included the leader, the organizer, the question person and the assistant. The following is a description of each role:

1) Leader- The student "in charge." Hands out materials. Directs activity (e.g. Points to words with the pointer).

2) Organizer- Responsible for organizing the station activity for the next group. Often referred to as the "clean-up" person.

3) Questions- The student responsible for asking questions when the group needs assistance. This student also contacts the teacher when "conflicts" erupt.

4) Assistant- This person assists any student who is having difficulty with their assigned role. The assistant also takes the role of any person who is absent.

In a class of 32 children, there were eight cooperative groups working on various tasks. Each task lasted approximately 20 minutes and two tasks were completed per day. By the end of the four-day cooperative learning week, the students had completed activities at eight stations, ranging from reading, to puzzles, art murals and pocket charts with sentence strips. The students were observed for five minutes as they participated in the activity. Each utterance (whether it was one word or a longer sentence) was marked by a tally.

Table One

Student	Leader	Organizer	Questions	Assistant
Melissa	12	5	6	4
Jose	9	12	3	6
David	16	11	13	5
Joe	13	9	11	5
Henry	6	3	7	12 *
Gustavo	9	6	12	11
Oscar	12	7	8	15 *
Fernando	17	14	7	5
Ben	17	6	8	12
Ismael	12	4	15	5
Total	140	77	90	70
Average	14	7.7	9	7

Utterances per 5 minutes by each student.

*Indicates the Assistant was playing the role of an absent student; in this case it was the role of the Leader.

On average, the students spoke the most when they played the role of the Leader: Approximately 12.3 utterances were recorded during the five minute observation time. The remaining roles invoked less talking with the Question person (9 utterances), the Assistant (8.9 utterances) and the Organizer (7.7 utterances) all relatively close. Overall, 70% of the LEP students produced the most utterances when they acted as the Leader. Only 20% of the LEP students spoke more when they were the Question person. An even smaller percentage, (10%) spoke the most when they were the Organizer. None of the students spoke the most utterances while acting as the Assistant unless they were taking on a new role for an absent student in their group (e.g. The Leader). When examining the opposite end of the scale the percentages were much closer. When did students talk the least? As the Organizer, 50% of the students spoke the least and as the Assistant the figure was 40% . Only 10% of the students spoke the least when working as the Question person and no one spoke the least when acting as the Leader.

An interesting correlation developed when the students were interviewed. When asked, "Which role do you like to play the most?", 50% of the students responded with "the Assistant" and 40% with "the Leader." The high percentage of students that chose the Assistant as their favorite role did not coincide with the amount of talking that was done when a student was engaged in this role. It would seem that

if the student was more comfortable with the role of the Assistant, the student would do more talking. The averages do not support this however. If the reader will recall, none of the students spoke the most when acting as the Assistant. The only time this was true was when the Assistant had to take on the role of the Leader. Herein lies the explanation for the favorable rating the students gave the Assistant role. As the Assistant, one of the responsibilities was to take on the role of an absent person. In two of the cases the Assistant was able to play the role of the Leader. This role could vary from day to day depending on who was absent. As the Assistant, a student could very well play the role of the Leader (another top favorite), be in charge and do a great amount of talking! When the students were interviewed the responses provided an even clearer picture.

The Interviews

The writer conducted individual interviews with each of the ten LEP students. The following six questions were asked of each student:

1. Which role do you like the most? Why?
2. Which role do you like the least? Why?
3. Do you like the stations? Why?
4. Do you like working on your own or with the group? Why?
5. How do you feel when you are at the stations?
6. How do you feel when you work by yourself?

As stated before, the most popular answer to the question, "Which role do you like to play the most?" was "the Assistant" followed closely by "the Leader." The reasons for the students' choices were interesting. The following are exact quotes from the students as to why they chose the Assistant in response to the first question.

"Because I can take other people's places."

"You get to take their place--like the Leader."

"Help the Organizer clean."

"Because people aren't here, you get to take their place."

"Because you get to take people place. Leader."

The most popular reason for wanting to be the Assistant was the opportunity to play other roles within the group. Specifically mentioned twice was the role of the Leader in which the most talking was recorded during the observation. Again, there is the correlation between the desire to be the Leader and the high amount of talking that was recorded in that role. The reasons for choosing the Leader are quoted below.

"Because you point at the letters."

" I like to help my group."

"You tell what to do at the stations."

" So you can hold the book at the listening center."

All of the explanations indicate that the student is in charge. As expected, a person in charge would need to do a significant amount of talking. This observation is important when considering the implications of comprehensible input and the role of output in second language acquisition. The student is producing language in what is apparently a low anxiety situation--the leadership role in a small group. The Affective Filter has been lowered and successful interaction can take place.

Returning to the second question, "What is your least favorite role?", most of the students viewed the Organizer as the least favorable. The reasons seemed to be more of a distaste for manual labor than anything else as illustrated by the following testimonials:

"Because I have to do the whole thing. Clean up the station."

"When the bell rings you have to organize the place."

"You have to cleanup the whole station."

"Because after you do something you have to clean it up and it takes a long time."

Question Three asked the students if they liked the cooperative group stations and why. An overwhelming 100% answered affirmatively and here were the reasons they gave:

"You get to read with people."

"Because I do! You do so much stuff that's fun."

"There are fun things. You could do things like draw or color."

"Because of fun and you can do stuff."

"You get to do the puzzles, puppets and math."

"You can do pictures and read together."

You learn how to get along. You learn a lot.

"Because you get to work with your friends."

"Because I can read a book at Station One with Derrelle or do the pocketchart."

"I learn. I can learn how to read. I read with people."

The fact that all of the LEP students enjoyed the cooperative learning stations was exciting when one thinks of the affective domain. With anxiety down and motivational levels up, the Affective Filter is less likely to block comprehensible input. In turn successful language acquisition can result.

Question Four asked students to choose between group and individual work. By a 70% majority, the students clearly favored working in a group. Again, the reasons for preferring group work seemed to indicate a lowering of the Affective Filter.

"It's better for helping."

"Because sometimes I can't finish and they help me."

"Like if you're alone and sometimes I need help, the group helps me with things I don't know.

"Because we help each other."

"You can share your stories sometimes. People tell about themselves.

"Because they could help you."

"They can help me and I can help them."

Not all of the students preferred working in groups over individual work. Two of the ten students (20%) preferred to work on their own. When asked why, the students gave clear and direct reasons.

"Because they bug me too much. They tell me the answers. I like to do it by myself with a little bit of help."

"Because I can finish faster and concentrate."

In this case the two students indicated a need for some individual "space." Perhaps too much talking was going on that deterred from the task at hand!

The last two questions asked how the students "felt" when they worked at the cooperative group stations and when they worked alone. These answers provided the most personal insight into the nature of cooperative learning and the affective domain of students. The following responses illustrate the positive experiences of the students.

"How do you feel when you work at the stations?"

"Good. Happy. Funny."

"Glad because you can do work with other people."

"I feel happy."

"Fine."

"Good because you're working."

"Happy. Smart."

"Fine."

"Proud because I can work with my friends."

"Like I'm having fun."

"I feel like regular. Like fun because someone is with you."

In contrast, many of the responses to the last question give one the impression that conditions are not optimal for either academic learning or language acquisition.

"How do you feel when you work by yourself?

"Sad because I don't have no one to ask questions. I think like I'm alone."

"Regular."

"Sad because you don't have answers with your group."

"Sad because I don't have nobody to help me."

"Sad because sometimes I get wrong problems."

"Like a jerk. Bad because nobody works with me."

Of course this is not to say that individual work does not have a place. The responses by three students clearly state a need for individual work time as well.

"How do you feel when you work by yourself?"

"Glad because nobody disturbs you."

"Good. It's quiet.

"I feel sort of happy because sometimes the group could fight."

After the interviews were concluded with the ten LEP students, a random sampling of Fluent English Proficient (FEP) and native English speakers (NES) was taken obtain some added personal insight to the cooperative learning experience. Similar to the LEP students, most of the FEP and NES students preferred the role of the Leader or the Assistant. In addition, the least preferred role was the Organizer as it was with the LEP students. The reasons given for these choices were almost identical to the explanations of the LEP students and will not be detailed. All of the students interviewed enjoyed working at the stations. Their comments are noteworthy and seem to reflect an attitude of acceptance and shared positive experiences.

"Why do you like the station activities?"

"Because I like to read with the group."

"It's fun because you get too do all these things."

"They are fun and educational."

"There may be lots of fun stuff."

"Because I like working with the other kids."

"Why do you like working with a group?"

"Because you can share your brains with each other."

"You can ask one of your group members for help."

"So I won't have to be lonely and do things by myself."

"How do you feel when you are at the stations?"

"I feel happy because stations are fun."

"Great because I love stations so much."

"Normal because my friends are there."

"Okay, Sometimes Jimmy is rude though."

The FEP and NES students also saw some advantages and disadvantages to working alone.

"How do you feel when you work by yourself?"

"Okay. Because I'm working faster by myself."

"Better. There's no rudeness."

"A little, you know, bored. Because there is no one to help share their brains with. It's more fun with the group."

"Lonely. because I might not know how to do it."

Conclusion

The preceding interviews provided a valuable source of information regarding students' attitudes toward cooperative learning. For the most part, the answers revealed a positive perception and a genuine appreciation for group activity. In addition, the classroom observations during the cooperative group work revealed a significant amount of interaction and communication among group members. Despite the methodological problems associated with classroom research, the fieldwork results lend support to the benefits of

cooperative learning in second language acquisition. In the next section, the importance of these parallels and the implications for education are discussed.

Implications for Education

The implications of cooperative learning in second language acquisition are truly exciting for those of us in the ESL profession. The parallels drawn between the cooperative learning framework and second language acquisition theory predict success for language minority students in the regular classroom. This prediction is significant when one considers the future of bilingual education in California. Currently the State of California is considering two competing pieces of legislation to decide on the education of language minority children. One measure would require bilingual instruction under most circumstances. The other bill would allow school districts to decide the best approach for their students, including the possibility if immersion (immersing LMS in English only programs) or relying more heavily on English instruction in all subject areas. "Although there is little consensus on how best to teach these students, both sides agree that California's future depends in large part on how well schools prepare them to take their place in society. They disagree on methods and priorities" (Merl, p. A19). Regardless of the outcome of this legislative squabbling, cooperative learning methods have a definite

place in second language acquisition in the regular classroom. The methods predict success in lowering the anxiety level of students and inspiring interest and motivation. With this low anxiety situation, comprehensible input can be provided. Success will mean providing for high levels of English proficiency.

Cooperative learning methods predict the fostering of prosocial values among students. Collaborative projects help students learn to share skills and ideas. Students can experience a positive psychological adjustment to school and society.

Cooperative learning methods predict the achievement of academic skills through the participation of shared practices. Students will develop appropriate levels of cognitive and academic skills.

The predictions that are stated here are a direct reflection of the goals for success of the language minority student. Cooperative learning can provide the best learning contexts for our students in our pluralistic society.

REFERENCES

Avila, E. (1985). Finding Out/Descubrimiento. Northvale, New Jersey: Santilla Publishing Company.

Banks, J. (December, 1991). Multicultural Literacy and Curriculum Reform. The Education Digest, 57 (4), 45-46.

Cochran, C. (Summer, 1989). Strategies for Involving LEP students in the All-English-Medium Classroom: A Cooperative Learning Approach. National Clearinghouse for Bilingual Education, (12).

Cohen, E. (1986). Designing Groupwork. Strategies for the Heterogeneous Classroom. New York: Teachers College Press.

Cohen, E. (April, 1989). Can Classrooms Learn? Sociology of Education, 62 (2), 75-94.

Cohen, E. (October, 1990). Continuing to Cooperate: Prerequisites for Persistence. Phi Delta Kappan, 72 (2), 134-136.

Dick, K. (Spring, 1991). Cooperative Learning: Mastering the Bundle of Sticks. Childhood Education, 67 (3), 17

Dolson, D. (1989). Introduction in Schooling and Language Minority Students: A Theoretical Framework. Los Angeles, California: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Ellis, R. (1985). Understanding Second Language Acquisition. New York: Oxford University Press.

Ellis, R. (1988). Theories of Second Language Acquisition. In P. Richard-Amato (Ed.), Making It Happen. Interaction in the Second Language Classroom: From Theory to Practice. (pp.301-329). New York: Longman.

Holt, D. and Tempes, F. (1982). Basic Principles for the Education of Language Minority Students: An Overview. Sacramento, California: California State Department of Education.

Holt, D. (1990). Improving Second Language Teaching Through Cooperative Learning. Sacramento, California: Bilingual Education Office.

Johnson, D. and Johnson, R. (1975). Learning Together and Alone. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Johnson, D., Johnson, R., Holubec, E. and Roy, P. (1984). Circles of Learning. Alexandria, Virginia: Association for Supervision and Curriculum Design.

Judy, S. (1980). The ABC's of Literacy. A Guidebook For Parents and Educators. New York: Oxford University Press, Inc.

Kagan, S. (1986). Cooperative Learning and Sociocultural Factors in Schooling. In Beyond Language: Social and Cultural Factors in Schooling Language Minority Students. (pp.231-298). Los Angeles, California: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Kagan, S. (1989). Cooperative Learning Resources For Teachers. Laguna Niguel, California: Resources For Teachers.

Kessler, C. (1992). Cooperative Language Learning. A Teacher's Resource Book. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Krashen, S. (1981). Bilingual Education and Second Language Acquisition Theory. In Schooling and Language Minority Students: A Theoretical Framework. (pp.51-79). Los Angeles, California: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Krashen,S. (1988). Providing Input for Acquisition. In P. Richard-Amato (Ed.), Making It Happen. Interaction in the Second Language Classroom: From Theory to Practice. New York: Longman.

Merl, J. (1993, April 14). Competing Bills in Bilingual Education Dispute to Be Weighed. Los Angeles Time, pp. 3, 19.

Richard-Amato, P. (1988). Making It Happen. Interaction in the Second Language Classroom: From Theory to Practice. New York: Longman.

Saljo, R. (July, 1991). Vygotskian Lessons. The Quarterly Newsletter of the Laboratory of Comparative Human Cognition, 13 (3) 71-73.

Sharan, S. and Sharan, H. (1988). Language and Learning in the Cooperative Classroom. New York: Springer-Verlag.

Slavin, R. (1983) When Does Cooperative Learning Increase Student Achievement? Psychological Bulletin, 94, 429-445.

Slavin, R., Farnish, A., Madden, N. and Stevens, R. (1987). Cooperative Integrated Reading and Composition: Two Field Experiments. Reading Research Quarterly, 22 (4), 433-454.

Slavin, R. (1989). Research on Cooperative Learning: Consensus & Controversy. Educational Leadership, 47, 52-54.

Vygotsky, L. (1986). Thought and Language, Cambridge, Massachusetts: The Massachusetts Institute of Technology Press.

Wertsch, J. (1991). Voices of the Mind. A Sociocultural Approach to Mediated Action. Cambridge, Massachusetts: Harvard University Press.

APPENDIX A

INTERPERSONAL PROCESSES OF COOPERATIVE LEARNING

Cooperative	Competitive	Individualistic
High interaction	Low interaction	No interaction
Mutual liking	Mutual dislike	No interaction
Effective communication	Misleading or no communication	No interaction
High trust	Low trust	No interaction
High mutual Influence	Low mutual influence	No interaction
High acceptance and support	Low acceptance and support	No interaction
High utilization of resources of students	No utilization of other resources of students	No interaction
High sharing and helping	Attempts to mislead and obstruct others	No interaction
High emotional involvement of all students	Emotional involvement of some students (winners)	No interaction
High coordinaton of effort	Low coordination of effort	No interaction
Division of labor possible	Division of labor not possible	No interaction
High divergent and risk-taking thinking	Low divergent and risk-taking skills	No interaction
No comparison of self versus others	High comparison of self versus others	No interaction

Adapted from D.W. Johnson & R.T. Johnson, Learning Together and Alone. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.

APPENDIX B

COGNITIVE OUTCOMES

Cognitive Outcomes	Cooperative	Competitive	Individualistic
Mastery of factual information			X
Retention, application, and transfer of factual information, concepts and principles	X		
Mastery of concepts and principles	X		
Verbal abilities	X		
Problem-solving ability and success	X		
Cooperative skills	X		
Creative ability: divergent and risk-taking thinking, productive controversy	X		
Awareness and utilization of one's capabilities	X		
Perspective- (role-) taking abilities	X		
Speed and quantity of work on simple drill activities		X	
Competitive skills		X	
Individualistic skills			X
Simple mechanical skills			X

Adapted from D.W. Johnson & R.T. Johnson, Learning Together and Alone. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.

APPENDIX C

AFFECTIVE OUTCOMES

Affective Outcomes	Cooperative	Competitive	Individualistic
Interpersonal skills for "humanness"	X		
Group skills for humanness	X		
Pluralistic, democratic values	X		
Acceptance and appreciation of cultural, ethnic, and individual differences	X		
Reduction of prejudice and bias	X		
Valuing education	X		
Positive attitudes toward school, subject area, instructional activities, school personnel and other students	X		
Enjoyment and satisfaction from learning	X		
Moderate levels of anxiety to promote learning	X		
Positive self attitudes	X		
Emotional capacity	X		

From D.W. Johnson & R.T. Johnson, Learning Together and Alone. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.