

**TEACHER PERCEPTION AND UTILIZATION OF COOPERATIVE  
LEARNING METHOD IN OKLAHOMA TRADE AND  
INDUSTRIAL EDUCATION  
PROGRAMS**

**By**

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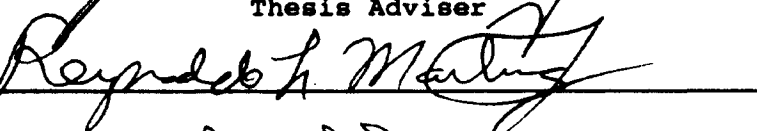
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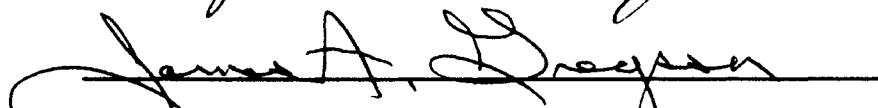
OKLAHOMA STATE UNIVERSITY

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## CHAPTER I

### INTRODUCTION

Cooperative learning, as a methodology, has been used by educators at one time or another through group discussions, group projects, group laboratories, or other similar contexts. According to Balkcom (1992, p. 1), "Cooperative learning is a successful teaching strategy in which small teams, each with students of differing levels of ability, use a variety of learning activities to improve their understanding of a subject." He further explained that each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Long (1989, p. 2) defines cooperative learning as "a set of instructional strategies in which students are grouped in teams where they work together toward a common goal." He also mentioned that as several different approaches to teaching are available, cooperative learning methods incorporate the idea that students must work together, help each other learn and also be responsible for their own performance. It is clear in these definitions, that cooperative learning is a concept of teamwork. Lankard (1992) is of the opinion that cooperative learning would gain the attention of vocational educators who must prepare students for employment in the work place. This obvious reason will require



vocational students to work in a group, in order to possess the characteristic associated with team work.

According to Slavin (1990, p. 34), "These methods are now being used extensively in every conceivable subject, at grade levels from kindergarten through college, and in all kinds of schools throughout the world." Since the traditional approaches to teaching have kept the student passive and the teacher active, cooperative learning provides a more positive way of helping the student learn. One would accept the fact that, there has been considerable interest and also controversy among researchers and practitioners as to whether students did better in cooperative learning as compared to a traditional classroom instruction. However, the list of benefits of cooperative learning were numerous. Singh (1991) in his article on teaching methods for reducing prejudice and enhancing academic achievement, mentioned some of the benefits of cooperative learning methods which included, promotion of students' peer relations, self-esteem, interdependence, and academic advancement. These were some of the skills required of employees in business and industries today based on research conducted by the National Aeronautics and Space Administration (NASA) and the Boeing Company as reported by Bovier (1993), he concluded in his report, that human error was responsible for 60 percent to 80 percent of flight accidents and this is largely due to flight crew lack of "soft skills"--poor group decision making, ineffective communication, inadequate leadership and poor management. This shows a lack of team work. In other words, this research helped to explain the importance of team work in business and industry which

is also a concept of Total Quality Management (TQM). According to Zemke (1993, p. 50), "Total quality management is based on the participation of all members of the organization in improving processes, products, services and the culture they work in."

In relation to education, Olson (1992) pointed out that TQM recognized students as both customers and employees of educational systems; as such they needed to be involved in their own education. Rhodes (1992) explained the role of teachers in the concept of total quality management as team work. Teachers were to work with their students and administrators in order to achieve the desired goal. On testing and evaluation of total quality management, Blankstein (1992) agreed that TQM embraced continuous progress reporting instead of standardized tests and grades which may not have given students the opportunity to see their mistakes except at the end of the test when it is too late to make correction.

Lankard (1992) is of the opinion that vocational teachers who must prepare their students for employment in a workplace increasingly focusing on teams should take the advantage of cooperative learning methods which provide students the opportunities to explore concepts and develop interpersonal skills.

The fact that teamwork was expanding not only in the classroom but also in the place of work has increased the need for trade and industrial education teachers who prepare their students for industries to utilize cooperative learning methods.

### Need for the Study

Research has shown a strong need for cooperative skills in the work place. This work place need, has enhanced my study to determine if trade and industrial educators were fulfilling the need of cooperative skills in their classroom and laboratories. Also to what extent do these teachers perceive cooperative learning method as a valuable technique in their classroom or laboratories? Therefore, this study will examine teacher perceptions and utilization of cooperative methods in competency-based programs of selected trades, in a sampling of Oklahoma area vocational and technical schools.

### Statement of the Problem

To successfully educate students in vocational programs for the modern workplace where team work is demanded, the teacher needs to allow the students to take part in their learning process by interrelating with each other, sharing ideas, helping each other, and be accountable for their learning. This is not the case found in some vocational classrooms where the students were assigned individual projects because some teachers believed that the best method of vocational instruction is through individual "hands-on" job related activities. This one way approach deprives the students from the benefits they stand to gain from a cooperative learning method. The problem is there is a lack of knowledge regarding the extent Trade and Industrial Education teachers know about and are using cooperative learning methods.

### Purpose of the Study

The purpose of this study was to determine Trade and Industrial Education teachers' perception and utilization of cooperative learning methods. The study will also determine benefits and problems associated with cooperative learning methods.

### Research Questions

In order to accomplish the purpose of this study, the following questions were formulated.

1. To what extent are vocational trade and industrial education teachers familiar with cooperative learning methods?
2. To what extent do vocational trade and industrial education teachers use planned cooperative learning methods in their classrooms or laboratories?
3. What benefits and problems do these teachers encounter in using planned cooperative learning methods in their classrooms or laboratories?

### Scope and Limitations

1. The study was limited to vocational trade and industrial education teachers in selected vocational and technical programs of Oklahoma on the basis of trades selected for this study.
2. The study was limited to representatives of the sampled schools of similar trades offered in the researcher's home country of Nigerian vocational and technical schools. However, the results can be generalized in similar trade schools in Nigeria and elsewhere.

3. The results were based on the perception of teachers and the utilization of cooperative learning methods in trade and industrial education programs in selected trades.

#### Assumptions

The following assumptions were used for this study:

1. Teachers are familiar with a variety of teaching methods.
2. The teachers that completed and returned the questionnaire followed the instructions and responded honestly.
3. The findings obtained could be utilized by teachers and supervisors of vocational technical education programs.

## CHAPTER II

### LITERATURE REVIEW

The literature revealed that teaching theory and practice tend to be similar in vocational and other courses of study. Furthermore, it pointed out that not all students learned well with the same method, therefore, if the main objective of teaching was to help students learn, then teachers needed to use a variety of methods.

Slavin (1990, p. 99) stated "In traditional classroom instruction, all students are expected to learn the same material and acquire a uniform set of concepts." This consistent type of learning did not occur in cooperative group learning situations where each student worked on part of the project, but all worked towards a common goal. This review covered selected issues on motivation, evaluation, planning instruction, and benefits of cooperative learning methods.

#### Benefits of Cooperative Learning

Hooper (1992) conducted research on the affect of peer interaction during competency-based mathematics instruction. The effects of group versus individualized instruction were investigated in high and average ability students, emphasizing the impact of ability grouping and achievement. The students were allowed to work individually or in pairs. A post-test was conducted and the students

who had worked in pairs scored higher than those who worked alone. These results clearly showed that the students who worked in pairs helped each other learn more by sharing ideas and teaching each other.

Lankard (1992), in his article on cooperative learning in vocational education, explained that cooperative learning was gaining the attention of teachers in vocational education who prepared students for employment in the work place where team work is increasingly being used. He further noted that the cooperative learning method was an excellent model which provided students the opportunity to explore concepts and develop interpersonal skills that enhanced their performance on the job. He also maintained that other researchers had shown, in various studies on cooperative learning, that these students had higher self-esteem and a more positive attitude toward others. It was clear, from Lankard's report, that there was an emerging need for vocational teachers to implement cooperative learning methods in their classrooms.

Bower (1989), in her article on cooperative multiple ability group work in social studies, argued that despite positive student interactions associated with cooperative learning in a heterogeneous classroom, cooperative learning was to create unequal contribution situations based on the status of group members. She did, however, support the theory that cooperative learning was only effective when interactions among equalized status quo groups were established by the educator. When this had been accomplished, then group work was more likely to be successful.

Duren (1992) presented a research report on the effects of

cooperative group work versus independent studying by helping the students incorporate problem-solving strategies in their long-term memory. His findings showed, when teaching problem-solving, the students who participated in cooperative learning, demonstrated greater long-term memory than the students who worked independently.

Epstein (1991) wrote on her evaluative report dealing with literacy through cooperative learning. The jigsaw reading method, she concluded, maximized the interaction basis of cooperative learning and when used in a multiple-level classroom. There were also the advantages of increased student independence, individual and group responsibility, peer acceptance and understanding, as well as the development of better social skills and the promotion of peer teaching. In addition, to the use of cooperative learning in multi-level classrooms, this method was also successful in a variety of content areas and adaptable for use in all age groups, as well as proving to be an aid in teacher assessment. However, dominance of one student group member was to be avoided. Johnson and Johnson (1987) were supportive of cooperative learning in view of the numerous benefits. They maintained that, cooperative interaction resulted in positive interpersonal relationships characterized by mutual liking, positive attitudes toward each other, mutual concern, friendliness, and attentiveness. The study also indicated that cooperative learning promoted positive self-attitudes and success experiences, which come about from contributing to group efforts and the utilization of one's resources by the group. These positive behaviors were needed in all classroom situations and by all students.



### Motivation

According to Slavin (1987, p. 11161), "Two elements are required to make cooperative learning more effective than traditional instruction: group rewards and individual accountability." He explained that group rewards provided incentive to the cooperating group to encourage and help its members to do whatever helped the group to succeed while individual accountability focused on individual scores as part of the group effort. Slavin is of the opinion that students were internally motivated to encourage each other and worked toward a collective success of their group. The fact that each student was accountable for the success of the group assures that team members are internally motivated to see the group succeed. Slavin (1990) agreed that there was strong evidence that cooperative learning methods made students feel that they had a chance to succeed and their efforts were to lead to success. These feelings were important in every student and were predictors of high achievement. Slavin's view was strengthened by Ball (1977, p. 2) when he stated that "A teacher does not by any means have total control of motivational process in the classroom." He defined motivation as "The process involved in arousing, directing, and sustaining behavior." It seemed true that the student's interest was aroused in cooperative learning.

This interest was also sustained as each student was accountable to a particular aspect of his/her group assignment. Johnson and Johnson (1987, p. 174) stated that "Motivation to achieve is based not upon competition with others but upon the belief that there is a

reasonable chance to accomplish desired goal." This research clearly demonstrated that cooperation was much more facilitative of motivated effort and achievement than was competition commonly noticed in a traditional classroom.

#### Planning Instruction

Lyman (1989, p. 3) stated, "Cooperative learning is a teaching strategy that promotes the positive interactions of children in small groups." Instead of working alone, or in a group with children of similar ability, students are grouped by the teacher in heterogeneous groups. Each group contained three or four students of varying achievement levels, background, socioeconomic status, and sex. He further explained that cooperative learning processes promoted student motivations, built group skill, fostered social and academic interactions among students. Also low achieving students felt successful by making positive contributions to the group. Lyman was quick to point out five characteristics that each cooperative learning activity needed to have in order to meet the needs of a particular student. These characteristics were:

1. The material was organized to encourage the students to work together;
2. The teacher designated student groups which had students of different backgrounds and levels of achievement;
3. Individual accountability was to be maintained by monitoring the progress of individual students;
4. A group reward for working together effectively was to be provided. Group grading was not to be used; and
5. The teacher needed to teach the skills necessary to work together effectively in groups (Lyman, 1989, p. 3).

These data showed evidence that cooperative learning must be carefully designed if meaningful success is to be achieved.

Hendricks (1982, p. 28) stated that "As educators we know that students learn through a variety of means and a program that uses only one or a limited number of instructional strategies is guaranteed by design to fail students." Hendricks further maintained that it was not the responsibility of all students to adapt to one system of learning but rather the responsibility of the instructor to provide a variety of instructional methods, thereby increasing the opportunity for student success. Because students had different learning styles, interests, and varying levels of motivation. It was important for the teacher to try different strategies. In establishing a cooperative structure, the teacher's role demanded five major sets of strategies. According to Johnson and Johnson (1987, p. 46), these strategies were:

1. clearly specifying the objective of the lesson;
2. making decisions about placing the students in learning groups before the lesson is taught;
3. clearly explaining the task and goal structure to students;
4. monitoring the effectiveness of cooperative learning groups and intervening to provide task assistance; and
5. Evaluating student achievement and helping students discuss how well they collaborated with each other.

#### Evaluation

Calderon (1989, p. 7) stated in her literature review on cooperative learning for limited-proficiency English students, "It is

important to explain to teachers that their role has shifted from transmitters of knowledge to mediators of thinking." Teachers were to also become involved in finding new ways of articulating cooperative learning instruction and assessment process. She stated, "Whatever tool or criteria for evaluations is selected, the critical point is to state this clearly to the students prior to the activity." On the role of students in a cooperative learning method, Calderon stressed the need for each student on the team to have a specific meaningful role assigned to him/her. When roles were not assigned, it was natural for students to turn to the most academically capable student to do the task. Students were to then be assigned a task and each student accountable to what he/she had learned or accomplished, and teach others.

Slavin (1990) in evaluating student achievement in group investigation, asserted that cooperative learning exposed the students to constant evaluations by both peers and by the teacher more than traditional whole-class instruction did. He was also of the opinion that many students were never heard in a traditional classroom until the day of final testing while in cooperative learning situations, students made frequent conversation and observations. They also shared ideas where necessary. It would then be agreed that pupils' effective experiences, level of motivation, and involvement were boosted.

Even though group dynamics characterize cooperative learning, the teacher could still give individual tests to measure student progress and learning. Other dimensions could be measured through teacher observation. Crosby and Petrosko (1990) maintained that the

A growing body of evidence as shown by researchers and reviewed in this study has recommended cooperative learning in all kinds of classrooms and in all subjects taught because of the numerous advantages it has over other traditional methods. With cooperative learning as a structured method of teaching, teachers played a significant role in planning. They needed to develop objectives to help students work effectively, organize the groups, monitor the groups, to identify problems, intervene as necessary to change the direction a group had taken in completing an assignment, and evaluate group and individual work in accordance to the set standards.

## CHAPTER III

### METHODOLOGY

Perceptions like opinions can vary from one person to the other. However, based on knowledge and experience similar perceptions can be determined. A perception study of this nature sought to determine how teachers use a particular methodology of teaching based on knowledge, experience and expertise. This chapter explained the design, used in conducting the research. It explained the procedure used to carry out the study. Some of the factors considered were population sample, instrumentation, and data collection.

#### Population

Jaccard (1983) defined population as the aggregate of all cases to which one wishes to generalize. Also Popham and Kenneth (1973) contended that in order to draw legitimate inferences about populations from samples, they had to be representative of the population and randomly selected. Similarly, a study conducted by Chapel (1990) on perceptions of classroom teachers on cooperative learning in classrooms, extracted his population from a stratified random sampling of teachers. This study of a similar nature selected ten different vocational/technical courses similar to programs offered in technical institutions in the researcher's home country of Nigeria.

These programs were:

- (a) air conditioning/heating and refrigeration;
- (b) auto body repair;
- (c) auto mechanics;
- (d) carpentry;
- (e) diesel mechanics;
- (f) electricity;
- (g) electronics;
- (h) machine tool;
- (i) masonry; and
- (j) welding.

Schools that offered these programs were selected at random for each of the 10 courses making a total of 100 teachers selected at random from the public area vocational and technical institutions of Oklahoma.

#### Instrument and Data Collection

A survey instrument was designed to obtain the data needed to achieve the purpose of the study. The questionnaire was designed by the researcher considering the research questions, literature review and a similar study conducted by Chapel (1990) on the perception of classroom teachers on cooperative learning in the classroom. A perception study conducted by Bond (1987) and Aghabekian (1988) used the Likert Scale type of questionnaire. This study of seeking teachers' perception is of a similar nature. Therefore the researcher used a Likert Scale type questionnaire. The instrument was developed in two parts. Part A sought demographic information on

name of school, location, and years of teaching experience. Part A of the questionnaire also included a Likert Scale with a five-point continuum to indicate the level of teachers' knowledge of cooperative learning, and some perception of benefits and problems. A weight of one was given to the "strongly disagree" positions on the scale while five was given for the "strongly agree." Part B of the instrument obtained free opinions of teachers concerning usage, benefits, and problems. The instrument was tested by some faculty and staff for face content validity, reliability and ease of completion and pilot tested by a group of vocational trade and industrial education teachers. The pilot test showed that the instrument to be useful in answering the research questions.

#### Statistical Method

In a perception study of this type, when the researcher is seeking to find out about the current phenomena, Key (1993) stated "Descriptive research is used to obtain information concerning the current status of the phenomena."

Descriptive statistics are used in gathering the information necessary to answer the research questions. The data was collected and analyzed using a simple percentage formula (i.e., frequency, mean and percentage.) Frequency and percent for the responses to the open ended questions were also calculated.



## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

#### Introduction

The purpose of this study was to determine Trade and Industrial (T&I) Education teachers' perception and utilization of cooperative learning methods in teaching trade and industrial education programs in Oklahoma vocational and technical institutions.

The study specifically asked three research questions.

1. To what extent are trade and industrial education teachers familiar with cooperative learning methods?

2. To what extent do trade and industrial education teachers use planned cooperative learning method in their classrooms and laboratories?

3. What benefits and problems do they encounter in using planned cooperative learning methods in their classrooms and laboratories?

Data for the study was collected from a population of T&I teachers selected from the ten different programs sampled for the study. A total of 100 questionnaires were sent out and 93 were returned, representing 93 percent of the sample. All questions were completed following the instructions given. The 93 respondents were from 36 area vocational and technical schools and all 10 of the designated trades were represented in the study sample. The

demographic information on subject taught and years of teaching experience by teachers, which ranged from one year to 30 years did not show any major difference on usage of cooperative learning that could be reported for the different trades.

#### Analysis of Data

Part A of the questionnaire was rated on the Five Point Likert scale: 1 point for "strongly disagree", 2 points for "disagree", 3 points for "undecided", 4 points for "agree", and 5 points for "strongly agree." The frequency and percentage of responses were computed. Part B of the questionnaire gave the teachers an opportunity to express their free opinion based on the research question. Frequency and percentage of responses were analyzed and presented.

#### Research Questions

Research Question 1: To what extent are trade and industrial education teachers familiar with cooperative learning methods?

Question item numbers one through 10 on the questionnaire were to determine T&I teachers' knowledge of cooperative learning methods. Their responses to the perception statements was analyzed and explained.

Table I shows the frequency and percentage of responses to item 1 on the questionnaire, "The Cooperative Learning Method allows students to work in a group of mixed ability". Four teachers (4.4%) either "disagreed" or "strongly disagreed" with this statement. While, 42 teachers (45.2%) were "undecided". Forty-seven teachers

TABLE I  
THE COOPERATIVE LEARNING METHOD ALLOWS STUDENTS TO WORK  
IN A GROUP OF MIXED ABILITY

Teachers' Response	Frequency (N = 93)	Percent
Disagree	2	2.2
Strongly Disagree	2	2.2
Undecided	42	45.1
Agree	16	17.2
Strongly Agree	31	33.3

(50.5%), which represented about one half of the survey received, either "agreed" or "strongly agreed" with this statement.

Table II shows the frequency and percentage of responses to item 2 on the questionnaire, "In cooperative learning methods, students share ideas and help each other learn." A small number (3) of teachers representing 3.3 percent "disagreed" to "strongly disagreed" with this statement, while 39 teachers (42%) were "undecided". A majority number, 51 teachers which was more than one half of the survey (54.7%), "agreed" and "strongly agreed" with the statement as a characteristic of cooperative learning.

Table III shows the frequency and percentage of responses to item 3 on the questionnaire, "Students are accountable to their own learning in a cooperative learning method. Teachers were almost evenly divided in their opinions to this statement. Thirty teachers,

TABLE II  
 IN COOPERATIVE LEARNING METHODS, STUDENTS SHARE  
 IDEAS AND HELP EACH OTHER LEARN

Teachers' Response	Frequency (N = 93)	Percent
Disagree	1	1.1
Strongly Disagree	2	2.2
Undecided	39	42.0
Agree	15	16.0
Strongly Agree	36	38.7

TABLE III  
 STUDENTS ARE ACCOUNTABLE FOR THEIR OWN LEARNING IN  
 A COOPERATIVE LEARNING METHOD

Teachers' Response	Frequency (N = 93)	Percent
Disagree	26	28.0
Strongly Disagree	4	4.0
Undecided	24	26.0
Agree	35	38.0
Strongly Agree	4	4.03

representing 32 percent, "disagreed" and "strongly disagreed" while 24 teachers (26%) were "undecided" and 39 teachers (42%) "agreed" and

"strongly agreed".

Table IV shows the frequency and percentage of responses to item 4 on the questionnaire, "Students work toward a common goal in a cooperative learning activity." A total of seven teachers (7.5%) either "disagreed" and "strongly disagreed" with the statement as shown in the table. Of about one half of the survey responses received, 40 teachers (43%), remained "undecided" while 46 teachers (48.5%) either "agreed" or "strongly agreed" with this statement.

Table V shows the frequency and percentage of responses to item 5 on the questionnaire, "Students who work cooperatively should be evaluated based on a stated criteria." Eight teachers (8.6%) "disagreed" with the statement and about one half of the teachers surveyed, 44 (47.3%), were "undecided" while 41 (44.1%) had "agreed or

TABLE IV  
STUDENTS WORK TOWARD A COMMON GOAL IN A  
COOPERATIVE LEARNING ACTIVITY

Teachers' Response	Frequency (N = 93)	Percent
Disagree	6	6.4
Strongly Disagree	1	1.1
Undecided	40	43.0
Agree	10	10.8
Strongly Agree	36	37.7

TABLE V  
STUDENTS WHO LEARN COOPERATIVELY NEED TO BE  
EVALUATED BASED ON A STATED CRITERIA

Teachers' Response	Frequency (N = 93)	Percent
Disagree	8	8.6
Strongly Disagree	0	.0
Undecided	44	47.3
Agree	8	8.6
Strongly Agree	33	35.5

"strongly agreed" with this statement as a characteristic of cooperative learning methods.

Table VI shows the frequency and percentage of the teachers' responses to item 6 on the questionnaire, "The teacher should select and organize material that would encourage students to work in a cooperative group." A total of 11 teachers (11.9%) "disagreed" and "strongly disagreed" to this statement while 40 teachers (43%), of the survey responses received, remained "undecided." Forty-two teachers (45.1%) "agreed" and "strongly agreed" with the statement.

Table VII shows the frequency and percentage of teachers' responses to item 7 on the questionnaire, "The teacher should clearly specify the objective of the lesson and explain the task to students in cooperative learning." Although 46 teachers (49.4%) were "undecided" about this statement, 44 teachers (47.3%), "agreed"

TABLE VI

THE TEACHER SHOULD SELECT AND ORGANIZE MATERIAL THAT  
WOULD ENCOURAGE STUDENTS TO WORK COOPERATIVELY

Teachers' Response	Frequency (N = 93)	Percent
Disagree	10	10.8
Strongly Disagree	1	1.1
Undecided	40	43.0
Agree	10	10.8
Strongly Agree	32	34.3

TABLE VII

TEACHERS SHOULD CLEARLY SPECIFY THE OBJECTIVES OF  
THE LESSON AND EXPLAIN THE TASKS TO STUDENTS  
IN COOPERATIVE LEARNING

Teachers' Response	Frequency (N = 93)	Percent
Disagree	2	2.2
Strongly Disagree	1	1.1
Undecided	46	49.4
Agree	8	8.6
Strongly Agree	36	38.7

"undecided" about this statement, 44 teachers (47.3%), "agreed" and "strongly agreed" with this statement. Only three teachers (3.3%) "disagreed" and "strongly disagreed".

Table VIII shows the frequency and percentage to item 8 on the questionnaire, "The teacher should place students in a mixed ability group." Of slightly below one half of the survey responses received, 35 teachers (37.6%) were "undecided" while 50 teachers (53.8%) "agreed" and "strongly agreed" with this statement. A total of eight teachers (8.6%) "disagreed" and "strongly disagreed."

TABLE VIII

## THE TEACHER SHOULD PLACE STUDENTS IN A MIXED ABILITY GROUP

Teachers' Response	Frequency (N = 93)	Percent
Disagree	4	4.3
Strongly Disagree	4	4.3
Undecided	35	37.6
Agree	14	15.1
Strongly Agree	36	38.7

Table IX shows the frequency and percentage of survey responses to item 9 on the questionnaire, "The teacher should select and



**TABLE IX**  
**THE TEACHER SHOULD SELECT AND EXPLAIN SOCIAL SKILLS**  
**TO STUDENTS WHO NEED TO LEARN**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	2	2.2
Strongly Disagree	0	.0
Undecided	48	51.6
Agree	3	3.2
Strongly Agree	40	43.0

remained "undecided". Forty-three teachers (46.2%) "disagreed" and "strongly disagreed" with this statement.

Table X shows the frequency and percentage of survey responses to item 10 on the questionnaire, "The criteria for evaluation should be selected and explained to students clearly." Two teachers (2.2%) "disagreed" with this statement and 42 teachers (45.1%) were "undecided". However, more than one half of the survey, 49 teachers (52.7%), "agreed" and "strongly agreed" with the statement.

Research Question 3. What benefits and problems do trade and industrial education teachers encounter in using planned cooperative learning methods in their classrooms and laboratories.

**TABLE X**  
**THE CRITERIA FOR EVALUATION SHOULD BE SELECTED AND**  
**EXPLAINED CLEARLY TO STUDENTS**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	2	2.2
Strongly Disagree	0	.0
Undecided	42	45.1
Agree	2	2.2
Strongly Agree	47	50.5

Question items 11 through 15 on the questionnaire were to determine the benefits gained in using planned cooperative learning methods while question item numbers 16 through 20 determined some of the problems the teachers encountered.

Table XI shows the frequency and percentage of responses to item 11 on the questionnaire, "The Cooperative Learning Method promotes self-esteem among students." Five teachers (5.4%) "disagreed" and "strongly disagreed" with the statement while 28 teachers (30.1%) were "undecided". Sixty teachers (64.5%) "agreed" and "strongly agreed" with the statement.

Table XII shows the frequency and percentage of responses to item 12 on the questionnaire, "Students develop positive attitudes toward members of their group." Eight teachers (8.6%) "disagreed" to "strongly disagreed" with this statement. A considerable number,

**TABLE XI**  
**THE COOPERATIVE LEARNING METHOD PROMOTES**  
**SELF-ESTEEM AMONG STUDENTS**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	4	4.3
Strongly Disagree	1	1.1
Undecided	28	30.1
Agree	18	19.4
Strongly Agree	42	45.1

**TABLE XII**  
**STUDENTS DEVELOP POSITIVE ATTITUDES TOWARD**  
**MEMBERS OF THEIR GROUP**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	6	6.4
Strongly Disagree	2	2.2
Undecided	30	32.2
Agree	42	45.2
Strongly Agree	13	14.0

30 teachers (32.2%), remained "undecided" while a total of 55 teachers (59.2%) "agreed" to "strongly agreed" with this statement.

Table XIII shows the frequency and percentage of responses to item 13 on the questionnaire, "Students who learn in a cooperative learning class have higher knowledge retention rate." Three teachers (3.3%) "disagree" with this statement and 48 teachers (51.6%) were "undecided". A total of 42 teachers (45.1%) "agreed" to "strongly agreed" with the statement.

TABLE XIII

STUDENTS WHO LEARN IN A COOPERATIVE LEARNING CLASS HAVE  
A HIGHER KNOWLEDGE RETENTION RATE

Teachers' Response	Frequency (N = 93)	Percent
Disagree	2	2.2
Strongly Disagree	1	1.1
Undecided	48	51.6
Agree	34	36.5
Strongly Agree	8	8.6

Table XIV shows the frequency and percentage of teachers' responses to item 14 on the questionnaire, "Students develop leadership qualities in cooperative learning activities." Seven

TABLE XIV  
STUDENTS DEVELOP LEADERSHIP QUALITIES IN A  
COOPERATIVE LEARNING ACTIVITY

Teachers' Response	Frequency (N = 93)	Percent
Disagree	7	7.5
Strongly Disagree	0	.0
Undecided	48	51.6
Agree	12	12.9
Strongly Agree	26	28.0

teachers (7.5%) "disagreed" while 48 teachers (51.6%) remained "undecided". A total of 38 teachers (40.9%) "agreed" to "strongly agreed" with this statement.

Table XV shows the frequency and percentage teachers' responses to item 15 on the questionnaire, "Students who learn in cooperative activities develop accountability skills." A total of three teachers (3.3%) "disagreed" to "strongly disagreed" with the statement and 47 teachers (50.5%) were "undecided". Forty-three teachers (46.2%) "agreed" to "strongly agreed" with this statement.

Table XVI shows the frequency and percentage of teachers' responses to item 16 on the questionnaire, "It is difficult to motivate students when using cooperative learning." A total of 54 teachers (58%) "disagreed" to "strongly disagreed" with the statement while 22 teachers (23.7%) were "undecided" with the statement while

**TABLE XV**  
**STUDENTS WHO LEARN IN COOPERATIVE LEARNING,**  
**DEVELOP ACCOUNTABILITY SKILLS**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	1	1.1
Strongly Disagree	2	2.2
Undecided	47	50.5
Agree	17	18.2
Strongly Agree	26	28.0

**TABLE XVI**  
**IT IS DIFFICULT TO MOTIVATE STUDENTS WHEN**  
**USING COOPERATIVE LEARNING**

Teachers' Response	Frequency (N = 93)	Percent
Disagree	48	51.6
Strongly Disagree	6	6.4
Undecided	22	23.7
Agree	12	12.9
Strongly Agree	5	5.4

17 teachers (18.3%) "agreed" to "strongly agreed" with the statement.

Table XVII shows the frequency and percentage of the teachers' responses to item 17 on the questionnaire, "The evaluation process is difficult for cooperative learning activities." A total of 24 teachers (25.9%) "disagreed" to "strongly disagreed" with the statement while 22 teachers (23.7%) were "undecided." More than one half of the responses received, 47 teachers (50.4%), "agreed" to "strongly agreed" with the statement.

TABLE XVII

THE EVALUATION PROCESS IS DIFFICULT FOR  
COOPERATIVE LEARNING ACTIVITIES

Teachers' Response	Frequency (N = 93)	Percent
Disagree	22	23.7
Strongly Disagree	2	2.2
Undecided	22	23.7
Agree	34	36.5
Strongly Agree	13	13.9

Table XVIII shows the frequency and percentage of teachers' responses to item 18 on the questionnaire, "Teachers find it difficult to determine tasks that demand cooperative learning group."

TABLE XVIII  
TEACHERS FIND IT DIFFICULT TO DETERMINE TASKS THAT  
DEMAND COOPERATIVE LEARNING METHODS

Teachers' Response	Frequency (N = 93)	Percent
Disagree	45	48.4
Strongly Disagree	6	6.4
Undecided	20	21.5
Agree	20	21.5
Strongly Agree	2	2.2

A total of 51 teachers (54.8%) "disagreed" to "strongly disagreed" that determining the task is difficult while 20 teachers (21.5%) remained "undecided". A total of 22 teachers (23.7%) "agreed" to "strongly agreed" with the statement.

Table XIX shows the frequency and percentage of teachers' responses to item 19 on the questionnaire, "When students are assigned to a cooperative learning group, it is difficult to balance the team composed of mixed ability students." A total of 45 teachers (48.3%) "disagreed" to "strongly disagreed" with the statement and 14 teachers (15.1%) were "undecided". Thirty-four teachers (36.6%) "agreed" to "strongly agreed" to the statement.

Table XX shows the frequency and percentage of responses to item 20 on the questionnaire, "Student progress may be disrupted by a



TABLE XIX

WHEN STUDENTS ARE ASSIGNED TO COOPERATIVE LEARNING GROUPS,  
IT IS DIFFICULT TO BALANCE THE TEAM THAT IS  
COMPOSED OF MIXED ABILITY STUDENTS

Teachers' Response	Frequency (N = 93)	Percent
Disagree	39	41.9
Strongly Disagree	6	6.4
Undecided	14	15.1
Agree	32	34.4
Strongly Agree	2	2.2

TABLE XX

STUDENTS' PROGRESS MAY BE DISRUPTED BY AN  
ABSENT GROUP MEMBER

Teachers' Response	Frequency (N = 93)	Percent
Disagree	14	15.1
Strongly Disagree	6	6.4
Undecided	32	34.4
Agree	39	41.9
Strongly Agree	2	2.2

group member being absent." A total of 20 teachers (21.5%) "disagreed" and "strongly disagreed" with the statement while 32 teachers (34.4%) remained "undecided". However, a total of 41 teachers (44.1%) "agreed" to "strongly agreed" with the statement.

Table XXI shows the frequency and percentage of the respondents for the teaching strategy used by teachers. Thirty-six teachers (38.7%) used the learning activity packets while nine teachers (9.6%) used the teacher-paced or lecture method. However, 30 teachers (32.3%) used cooperative learning and 18 teachers (19.4%) did not answer the question.

TABLE XXI

## WHAT TEACHING STRATEGY DO TEACHERS USE MOST?

Teaching Strategy	Frequency (N = 93)	Percent
LAP	36	38.7
Teacher-Paced	9	9.6
Cooperative Learning	30	32.3
No Response	18	19.4
Total	93	100

Table XXII shows the frequency of the use of the different teaching strategies by teachers. Six teachers used Laps one to two times a week while 30 teachers used it daily. Six teachers used the teacher-paced strategy one to two times a week while three teachers

TABLE XXII  
HOW OFTEN DO TEACHERS USE TEACHING STRATEGIES?

Teaching Strategy	1-2 Times Week	Daily	Total	Percent
LAP	6	30	36	38.7
Teacher-Paced	6	3	9	9.7
Cooperative Learning	20	10	30	32.3
No Response			<u>18</u>	19.3
Total			93	

used it daily. Cooperative learning was used by 20 teachers one to two times a week and ten teachers used it daily.

Table XXIII shows the frequency and percentage of responses to question item 3 in Part B of the questionnaire, "Do you teach specific duties and tasks using cooperative learning methods?" Thirty teachers (32.2%) stated that they taught specific task duties using cooperative learning while 35 stated that they did not teach specific duties and tasks using cooperative learning. Twenty-eight

TABLE XXIII  
DO YOU TEACH SPECIFIC DUTY TASKS USING  
COOPERATIVE LEARNING METHODS?

Teachers' Response	Frequency (N = 93)	Percent
Yes	30	32.2
No	35	37.6
No Response	28	30.1

teachers (30.1%) did not answer the question.

Table XXIV shows the frequency and percentage of teachers' responses to question item number 3b in Part B of the questionnaire, For what duties or tasks do you use for cooperative learning. Eighteen teachers (60%) stated that they used cooperative learning for tasks that demanded hands-on skills while 12 teachers (40%) stated that they used cooperative learning in teaching tasks with multiple stages or operations.

Important Benefits and Problems Encountered in  
Cooperative Group Instruction

A total of 30 teachers (32.2%) gave the following benefits and problems of cooperative learning.

The benefits included:

- (a) full participation - two teachers
- (b) improved grades - four teachers
- (c) learning to work together - six teachers
- (d) improved social skills - one teacher
- (e) easy supervision by teachers - one teacher

The following problems were also mentioned.

- (a) limits knowledge - three teachers
- (b) difficulty of evaluation - five teachers
- (c) absenteeism by some members of the groups - three teachers

The benefits and problems mentioned by the teachers were relevant to those mentioned in the questionnaire. However some benefits and problems mentioned by the teachers were not part of the survey. Benefits (i.e., full participation and easy supervision and problem) limit a student's knowledge.

TABLE XXIV

FOR WHAT DUTIES OR TASKS DO TEACHERS USE COOPERATIVE LEARNING?

Teachers' Response	Frequency (N = 93)	Percent
Hands-on Skills	18	19.3
Tasks with Multiple Stages	12	12.9

## CHAPTER V

### SUMMARY, FINDINGS, AND RECOMMENDATIONS

#### Summary

The purpose of this study was to find out if Trade and Industrial (T&I) Education teachers are familiar with and use planned cooperative learning methods in their classrooms and laboratories and also what benefits and problems they encountered. One hundred teachers from various Oklahoma vocational and technical institutions were sampled. Ninety-three questionnaires were received and analyzed.

#### Research Questions

Research Question 1: To what extent are trade and industrial education teachers familiar with cooperative learning methods?

Research Question 2: To what extent do trade and industrial education teachers use planned cooperative learning methods?

Research Question 3: What benefits and problems do they encounter in using planned cooperative learning methods?

On the basis of these research questions, perception statements were developed to answer the questions. Part B of the survey provided the teachers with open-ended questions to enable them to indicate the degree of utilization.

## Findings

### Cooperative Learning

Research Question 1. To what extent are trade and industrial education teachers familiar with cooperative learning methods? Table XXV shows a summary of questions 1-10 on the instrument which sought to determine knowledge of cooperative learning. Data had shown that 48.6 percent of the teachers surveyed had knowledge of cooperative learning methods. This also indicated that more than half of the respondents have not incorporated this method into their classrooms and laboratories. In other words, respondents had poor knowledge perceptions of the method, given the fact that this method has been around for the past 10 years.

Research Question 2. To what extent do trade and industrial education teachers use planned cooperative learning methods? Table XXIII had shown that only 32.2 percent of the teachers surveyed used planned cooperative learning methods and Table XXIV had also shown that 19.3 percent used it on "hands on skills" jobs while 12.9 percent used it on "tasks with multiple stages". This data had indicated that even those who have knowledge of cooperative learning, did not use it. While more than half of the teachers surveyed (68%) as shown on Table XXII used other teaching methods. The lack of usage is evident of a poor knowledge perception of this method.

Research Question 3. What benefits and problems do teachers encounter in using cooperative learning methods? Benefits - Table XXVI shows that 51.1 percent agreed of the teachers "agreed" with the benefits listed which ranged from promotion of positive self-esteem,

TABLE XXV  
SUMMARY OF QUESTION ITEMS 1-10

Responses	Frequency	Percent
Disagree/Strongly Disagree	77	8.3
Undecided	400	43.0
Agree/Strongly Agree	452	48.6

TABLE XXVI  
SUMMARY OF QUESTION ITEMS 11-15

Responses	Frequency	Percent
Disagree/Strongly Disagree	26	5.5
Undecided	201	43.2
Agree/Strongly Agree	238	51.1

development of leadership qualities and accountability skills. Some of the benefits gained which were not part of the survey but mentioned by the teachers were improved grades, easy supervision by



teachers and full participation by class members.

Problems - Table XXVII also shows that 34.6 percent of the respondents agreed with the problems associated with cooperative learning methods such as difficulty of evaluation, determining tasks, motivation, and balancing groups to comprise of mixed ability students. One other problem, which was not part of the survey but mentioned by the teachers, was limiting students' knowledge.

TABLE XXVII  
SUMMARY OF QUESTION ITEMS 16-20

Responses	Frequency	Percent
Disagree/Strongly Disagree	194	41.7
Undecided	110	23.6
Agree/Strongly Agree	161	34.6

The various tables in Chapter IV also showed that more than one half of the teachers surveyed were not familiar with and were not using cooperative learning methods or they chose to remain "undecided" in their opinion.

### Recommendations

This study had covered limited number of programs and only one state was involved. Therefore, I recommend that future studies may choose to examine other programs and cover other states. The fact that several studies in the literature reviewed explained the benefits of cooperative learning and suggested it be used in all subjects and in all kinds of schools, however, evidence from this study had shown that more than 50 percent of the T&I teachers surveyed, were either not familiar or used other teaching strategies ignoring the need for cooperative learning which can prepare their students for the workplace. The implication of this course is that vocational students may find themselves in industries and businesses working in the future without these vital skills associated with cooperative learning methods. This will also result in these students not adjusting to the working environment. Therefore, this researcher recommends that teacher educators teach T&I teachers this teaching strategy so that they will have a sound knowledge of this method and also incorporate it into their classrooms and laboratories.

This researcher also recommends an inclusion of cooperative learning strategy into the professional developing inservice training for T&I teachers at least twice a year to update their knowledge of cooperative learning methods.

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**APPENDIXES**

**APPENDIX A**

**LETTER TO T&I TEACHERS**




*Oklahoma State University*


SCHOOL OF OCCUPATIONAL AND ADULT EDUCATION  
Stillwater, Oklahoma. 74078

Dear T&I Teachers,

Cooperative learning is a teaching strategy in which small group of students of differing ability work together towards a common goal. They share ideas, helped each other to learn and are accountable to each other. These characteristics of team work are needed in business and industry today. Therefore, there is the need for trade and industrial education teachers to prepare their students for the work place by incorporating this teaching method in their classrooms and laboratories. This research is directed towards determining teachers perception and the degree of utilization of the cooperative learning method in Oklahoma trade and industrial education programs. Your sincere response in answering all items on the questionnaire will contribute to this research and be greatly appreciated. All information you give will be treated confidentially and used only for the purpose of this research. The questions will take approximately 10 minutes to complete. A self addressed envelope is enclosed for your reply.

Thank you.

  
H.B Ndahi,  
Researcher

  
Dr. Clyde B. Knight  
Research Adviser

**APPENDIX B**

**TEACHER QUESTIONNAIRE**



Code #

## Part A

Name of school.....  
 Location.....  
 Subject taught.....  
 Years of teaching experience.....

## Instruction

Please express your opinion on each item by  
 circling the appropriate number.

## THE COOPERATIVE LEARNING METHOD

- |   | Strongly disagree | Disagree | Undecided | Agree | Strongly Agree |
|---|-------------------|----------|-----------|-------|----------------|
| 1. The Cooperative learning method allows students to work in a group of mixed ability.                                     | 1                 | 2        | 3         | 4     | 5              |
| 2. In the cooperative learning method, students share ideas and help each other learn.                                      | 1                 | 2        | 3         | 4     | 5              |
| 3. Students are accountable for their own learning in a cooperative learning method.  | 1                 | 2        | 3         | 4     | 5              |
| 4. Students work towards a common goal in a cooperative learning activity.  | 1                 | 2        | 3         | 4     | 5              |
| 5. Students who learn cooperatively should be evaluated based on a stated criteria.   | 1                 | 2        | 3         | 4     | 5              |
| 6. The teacher should select and organize material that would encourage students to work in a cooperative group.            | 1                 | 2        | 3         | 4     | 5              |
| 7. The teacher should clearly specify the objective of the lesson and explain the task to students in cooperative learning. | 1                 | 2        | 3         | 4     | 5              |
| 8. The teacher should place students in a mixed ability group.  | 1                 | 2        | 3         | 4     | 5              |
| 9. The teacher should select and explain social skills students need to learn   | 1                 | 2        | 3         | 4     | 5              |
| 10. The criteria for evaluation should be selected and explained to students clearly.                                       | 1                 | 2        | 3         | 4     | 5              |

	1	2	3	4	5
	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
11. The Cooperative learning method promotes self-esteem among students.	1	2	3	4	5
12. Students develop positive attitudes towards members of their group.	1	2	3	4	5
13. Students who learn in a cooperative learning class have higher knowledge retention rate.	1	2	3	4	5
14. Students develop leadership qualities in a cooperative learning activities.	1	2	3	4	5
15. Students who learn in cooperative activities develop accountability skills.	1	2	3	4	5
16. It is difficult to motivate students when using cooperative learning.	1	2	3	4	5
17. The evaluation process is difficult for cooperative learning activities.	1	2	3	4	5
18. Teachers find it difficult to determine tasks that demand cooperative learning groups.	1	2	3	4	5
19. When students are assigned to a cooperative learning group, it is difficult to balance the team composed of mixed ability students.	1	2	3	4	5
20. Students progress may be disrupted by a group member being absent.	1	2	3	4	5

Part B.

Answer the following questions, be brief as possible.

- 1. What teaching strategy do you use most?.....
- 2. How often do you use it?.....
- 3. Do you teach specific duties-task in your subject area using planned cooperative group work?. Yes/No  
if yes, for what task do you use it? .....  
.....  
.....  
.....

- 4. List the most important benefits and some problem you encounter in a cooperative group instruction.  
Benefits .....  
.....  
.....  
.....

- Problems .....  
.....  
.....  
.....

**APPENDIX C**

**INSTITUTIONAL REVIEW BOARD APPROVAL SHEET**

OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
FOR HUMAN SUBJECTS RESEARCH

Date: 02-09-94

IRB#: ED-94-053

Proposal Title: TEACHER PERCEPTION AND UTILIZATION OF  
COOPERATIVE LEARNING METHOD IN TRADE AND INDUSTRIAL EDUCATION  
PROGRAMS

Principal Investigator(s): Dr. Clyde B. Knight, Hassan Bata Ndahi

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

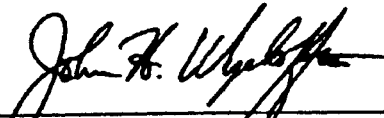
APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT  
MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR  
RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL. ANY MODIFICATIONS  
TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

---

Comments, Modifications/Conditions for Approval or Reasons for  
Deferral or Disapproval are as follows:

Signature:



Chair of Institutional Review Board

Date: February 10, 1994

VITA <sup>2</sup>

Hassan Bata Ndahi

Candidate for the Degree of

Master of Science

**Thesis:** TEACHER PERCEPTION AND UTILIZATION OF COOPERATIVE LEARNING  
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