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Maximizing the educational effects of collaborative learning: The role of vested interest

Christina Partin
University of South Florida

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Maximizing the Educational Effects of Collaborative Learning:
The Role of Vested Interest

by

Christina Partin

A thesis submitted in partial fulfillment
of the requirements for the degree of
Masters of Arts
Department of Sociology
College of Arts and Sciences
University of South Florida

Major Professor: Maralee Mayberry, Ph.D.
Michael Kleiman, Ph.D.
James Cavendish, Ph.D.

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ABSTRACT

This study, using a quasi-experimental research design, investigates connections between pedagogy and social psychology by applying social psychological theories of group work and interaction to collaborative learning, a current trend in pedagogical techniques. It was hypothesized that by creating a setting in which students would be evaluated based in part on the performance of their peers would improve their individual performance. The incentive (a percentage of their grade) would hypothetically motivate students to teach their peers effectively; thus they would be taking a vested-interest role in becoming a co-teacher to their partner. This study was implemented by examining two sections of Introduction to Sociology which were taught concurrently and in exactly the same manner, with the only difference between the classes being the vested-interest feature present in the experimental class and absent from the control class.

While this technique was determined not to have any statistical significance on the students' final grades, it did indicate that other factors involved in group work and collaborative learning might influence student outcomes or perceived student outcomes. Students in the experimental course exhibited more signs of anxiety about their grades, expressed more concern about their partners' abilities, and gave the instructor

significantly lower ratings than the control class. However, students in the experimental class also came to class more often. These findings may indicate that placing a grade on group work, while effective in encouraging attendance, does not significantly alter the output of the group. Instead, this increased pressure about partners' performance may diminish the effectiveness of the group as students tend to see that the performance of their partners as outside of their own control.

INTRODUCTION

Collaborative learning is a type of cooperative classroom learning mechanism that has been widely employed in the last several decades (Cohen, 1994). Many articles and publications have reported glowing results in learning outcomes from using cooperative techniques (Cohen, 1994; Johnson & Johnson, 1998). There is a gap in the literature regarding how theories from social psychology can be applied to collaborative learning to help us understand learning outcomes. The present research serves to apply theories from social psychology to a collaborative classroom setting to explore potential connections. Included are a thorough review of the cooperative/collaborative literature, as well as theories and research from social psychology that will enable me to address possible oversights in past research. Specifically, this research will address the following questions: Is vested-interest (an original concept with a background from social psychology, explained herein) an effective technique in increasing the potential benefits of collaborative learning? Are there particular circumstances where vested-interest impacts learning outcomes?

Classroom Organization

Not all classrooms are the same. Teachers implement different classroom management styles based on their own personal pedagogy and methodology. In the classroom setting, the students are individuals, but depending on the manner in which the classroom is arranged, the students can relate to each other in different ways. According

to Johnson and Johnson (1998), there are three ways that an individual's actions can relate to the actions of others: competition, individualism, or cooperation. These various patterns of contact affect how students interact, how students feel about the interaction, and the outcome of the interaction.

When classrooms are organized in ways that encourage competition, as they traditionally have been, the success of an individual is dependent on the failure of others. This is the case when teachers grade on a curve or allow the best student to set the standard for the rest. In these class settings, students do not see each other as coworkers or classmates, but as competitors who need to be eliminated to ensure individual success. This leads to a negative correlation between students' success—as some students' grades increase, others are left performing (or at least being evaluated) more poorly than they would have done in isolation from other students, or in a different class population (Johnson & Johnson, 1998). In such a setting, students may feel pressured to obstruct the success of others for personal benefit and individual success.

In comparison, when classrooms are organized in an individualistic manner, an individual's evaluation is irrelevant to the goals of others. Student success is not contingent upon the success of others. While this technique may be easy to implement, it does not encourage teamwork. An individual will make decisions and exert effort only to the extent necessary to achieve his or her personal goals without any interest of others in mind. Students in this scenario are aware that their performance will not influence the success of others, nor will they be influenced by the performance of others. Students learn quickly that interactions are ancillary, or possibly even bothersome, and work alone to accomplish isolated goals (Johnson & Johnson, 1998).

Finally, in a cooperative setting students work together to achieve educational goals. With this technique, there is a positive correlation between students' success: an individual can succeed only if others in the group are also succeeding. In this case, individuals think of their goals in terms of the greater good of the group instead of thinking of themselves only. An individual's actions can promote the success of others, and vice-versa. Students realize that the best way to succeed is to work together and to encourage all group members to achieve (Johnson & Johnson, 1998).

Collaborative Learning

Traditionally in college teaching, the focus of the class has been on the lectures of the professor. In competitive classroom settings, which are common in higher education, the students are graded according to their ability to retain information better than their peers. Recently, especially in the last two decades, researchers and educators have begun to challenge lecture-based classrooms that encourage competition and are utilizing other teaching methods in an effort to increase class performance as well as to help students gain life-skills. One method that has moved into the spotlight of instruction is collaborative learning (Slavin, 1982; Whitman, 1988; and Michaelsen, 2002).

Collaborative learning is a variation of cooperative learning, which exists when students work together in groups to achieve common goals. Collaborative learning differs from cooperative learning in that it gives students more freedom to work independently from the instructor, within their group, while still adhering to the principles of cooperative learning. Thus, collaborative learning is a subgroup of cooperative learning. Most research has been done on cooperative learning, which

emphasizes more direct instruction from the teacher, but the principals are the same as in collaborative learning. For this reason, the terms “cooperative learning” and “collaborative learning” are used interchangeably in this research based on the previous research being cited.

Johnson and Johnson (1998) have found that this collaborative technique creates higher achievement in the classroom, higher productivity, positive relationships between students, and increased psychological health. With the influx of attention turned toward collaborative learning in education, it is first important to understand exactly what collaborative learning is and how it differs from traditional class settings.

Since its onset, cooperative learning has generated a debate in education and research. Some believe that cooperative learning is a way to shift the burden of preparing a class from the teacher and onto the students (Felder, 1996). Others believe that cooperative learning is simply another way of reproducing the dominant discourse without implementing analytical skill building into the curricula (Mayberry, 1998). However, many people believe that cooperation enhances the learning process and the education that a student receives (Slavin, 1982; Whitman, 1988, Johnson & Johnson, 1998; and Michaelsen, 2002). The research supporting cooperative learning as a viable or useful instructional method, as shown in Johnson and Johnson’s meta-analysis of instructional outcomes (1989), indicates that cooperative learners outperform learners from competitive or individualistic environments. The study reports that students in cooperative learning environments demonstrate greater retention, greater willingness to take on difficult tasks, creative thinking (defined by an ability to generate new ideas and strategies that one would not have created on his or her own), and an increased ability to

apply newly learned information to previously learned information (Johnson and Johnson, 1998). It appears that the benefits to cooperative and collaborative learning are noteworthy. However, are the possible benefits of cooperative learning being maximized to their fullest potential?

THEORETICAL BACKGROUND/REVIEW OF EXISTING LITERATURE

Educational Pedagogy

“Vested-interest learning” is a term that I have created to describe the techniques I propose implementing in the classroom. The term is original, but its foundations are based in constructivist theories of education (Habron, 2005; Milbrandt, 2004; Smith 1992), and interdependence theories from social psychology (Lewin, 1947). These theories share in common the emphasis on working together to achieve, but all are lacking in one essential area: students’ material or objective interests in participation.

Collaborative learning is one of many techniques, along with cooperative learning, peer-led guided inquiry, and group-based or team-based learning, that share in common the goal of joint intellectual effort by students. These pedagogies are based in constructivist approaches to education where there is an “emphasis [placed] on the active social participation of the learner with the environment” (Milbrandt, 2004). Students in collaborative learning environments are not assumed to be passive recipients of knowledge, but rather they are co-creators of knowledge. The constructivist approach also takes into account the adage that “we learn best by teaching others.” According to Whitman (1988), teaching others is an incredible way for students to fully understand and gain insight into knowledge, because during the process of teaching others, students must explain and reword meanings and give multiple examples to their peers. Whitman (1988) refers to this process as learning the material a second time, which leads to a deeper and fuller understanding and processing of materials covered in the classroom.

Constructivist approaches also consider the application of active learning. Active learning is a teaching style that encourages students to look beyond their books and develop their critical thinking skills. Students are not recipients of knowledge—they are asked to seek out the answers they look for and to question their own thoughts and beliefs, as well as to question the discourse presented by their instructors. Active learning ties inquiry into the classroom, and in conjunction with collaborative learning, helps students realize their fuller potentials as students and as thinkers.

Social Psychology

Aside from the field of education, applications from social psychological theories are credited with much of the widespread success of cooperative learning. Many theories from social psychology have been aptly applied to cooperative learning to help explain and enhance its effects. Theories such as social interdependence, positive interdependence, and promotive interaction all have their places in collaborative learning (Lewin, 1947; Johnson & Johnson, 1998).

Social interdependence theory was developed initially by Kurt Koffka, a Gestalt Psychologist from the early 1900s, and later was expounded upon by one of his colleagues, Kurt Lewin (1947). Lewin believed that interdependence is the product of common goals within a group, and that this interdependence creates a “dynamic whole,” which in essence characterizes a group as a system by which offsetting one member of the system can jeopardize or offset other members in the group as well. Lewin (1947) also noted a tension which is present in groups and group members, which can lead to an

increase in group productivity and motivation. Group members may feel pressured to contribute to group work, and this would lead to an increase in productivity.

According to Deutsch (1949), “social interdependence exists when individuals share common goals and each individual’s outcomes are affected by the actions of others.” Accordingly, Johnson and Johnson (1998), differentiated social interdependence from social dependence (whereby the outcomes of one person are affected by the outcomes of a second person but not vice-versa), and social independence (whereby the individuals’ outcomes are affected by each other’s actions). Social interdependence is present in competitive and cooperative situations, and the absence of either social interdependence or dependence leads to an individualistic situation (Johnson & Johnson, 1998).

Positive interdependence “exists when one perceives that one is linked with others in a way so that one cannot succeed unless the others do (and vice versa) and/or that one must coordinate one’s efforts with the efforts of others to complete a task” (Johnson and Johnson, 1989). In other words, group members must realize that they not only have to perform on an individual level, but they also have a responsibility to be sure that their partner or group is performing as well. This is much aligned with the notion of “vested-interest” learning. Positive interdependence emphasizes individual accountability and personal responsibility. Individual accountability incorporates an individual’s personal responsibility for contributing a fair share of work, but it also includes that person’s willingness to work in a group setting and to help promote group cohesiveness.

Promotive interaction (Johnson & Johnson, 1989) furthers our understanding of group dynamics and interaction among students in a cooperative learning environment.

Promotive interaction can effectively be characterized as a process whereby:

students [are] providing others with efficient and effective help and assistance, as well as exchanging information and materials, providing each other with feedback, challenging each others' conclusions in order to create the best final answer, working to achieve mutual goals, being trustworthy, being motivated to strive for mutual benefit, and work to decrease anxiety and stress (Johnson & Johnson, 1989).

Promotive interaction can efficiently be considered an additive type task, where the performance of the group is dependent on the sum of all group members' contributions. Since individuals are not competing against each other, but rather working toward a common goal, the overall motivating factor of the group will be group success through which individual success will be achieved (Johnson and Johnson, 1998).

Vested-interest learning is related to the concept of constructivist learning in that students will be actively working to gain knowledge instead of being passive recipients. They will use collaborative learning techniques to achieve this. Social interdependence comes into play when we examine the dynamics of the groups, and how they will work together to achieve group goals knowing that individual outcomes are affected by the actions of others. Positive interdependence will give students a feeling of personal responsibility to their group, which will enhance the group effort. Promotive interaction helps guide the grade assignment of the group work, since students will perform for group success as opposed to individual success. My specific research focus will be how social interdependence theory, along with positive interdependence and promotive

interaction, can be applied to the constructivist approach to education by placing a vested-interest on group work and success, thereby giving a tangible and immediate value to group performance.

By applying these specific theories to collaborative learning in a controlled setting, we should be able to see whether social psychological theories actually impact the collaborative learning environment, or the result from the environment as measured by the learning outcomes. One specific area of social psychology that is only peripherally discussed in education literature is group formation. This area is important to social psychology, and should help measure understand what, if any, circumstances make vested-interest learning is effective.

Matching students

Previous literature on group work has debated the effectiveness of collaborative learning, specifically in questioning the assignment of group members and its effects on learning outcomes. Some researchers have suggested that students should be partnered with other students in mixed ability groups (Cumming, 1983). Theoretically, this would allow the weaker students to catch up to the stronger students. Other researchers have suggested that students should be “streamed,” or paired with students of similar abilities (McKeachie, 1974). Based on ideologies in the field of social psychology this method may be effective because it eliminates an academic burden from the stronger students (having to teach others) and from the weaker students (feeling that they are holding others back). Additionally, studies have shown that in mixed ability groups, the stronger students tend to improve while the weaker students remain at a constant (lower) level, as

group work facilitates the stronger students' ability to solidify information, while the weaker students do not have ample opportunities to explore and improve. In order to test both of these methods for effectiveness, this experiment includes both mixed and streamed ability groups.

Another important issue that needs to be addressed in any group setting is social loafing. Social interdependence, positive interdependence, or promotive interactions can not take place in groups with social loafing problems. Overall group success can not be accomplished if some members are not contributing. Social loafing is the phenomenon whereby a person in a group will contribute less since others in the group can compensate, will be effectively eliminated in this situation by using only two members, so that over or under compensation cannot go unnoticed. According to the results of a meta-analysis study of group performance (Karau & Williams, 1993), social loafing is a pervasive phenomenon, but it does not occur when group members feel that the task or the group itself is important. The groups in this vested-interest learning experiment will be made of co-peers (teachers who are at the same level as their learners) who will work together and share responsibility for one another (Whitman, 1988). This, Karau and Williams (1993) suggest, will increase the likelihood of group success.

RESEARCH QUESTIONS

The research on collaborative learning shows that as students work together, their class performance increases as a result of constructive group experiences (Johnson & Johnson, 1998; Whitman, 1988; and Michaelsen, 2002). However, there seems to be a gap in the literature that examines students' desire to work in groups or their level of involvement and participation. It is assumed in the literature that students who are placed in groups will have the desire to work within that group, although often times, there is no real desire, or reason to work together. Could it be that the students will do just enough group work to get by in the course, without maximizing their efforts? If group work becomes unfairly divided among students, as is sometimes the case, or if work is parceled out to minimize actual group interaction, is group or peer learning effective?

It is commonly said by teachers that they never truly learned a given material until they tried to teach it. The act of teaching other students may well be the biggest possible benefit of group work, but in half-hearted groups, is this stage being achieved? Will students put the extra effort into their group to create a learning/teaching environment if they see no tangible reward in doing so? Will group participation and effort increase if students are offered a tangible and immediate reward?

The literature from education maintains that collaborative learning is effective in enhancing student learning as measured by learning outcomes. Theories from social

psychology can be applied, which, based on previous literature, should show that with the right conditions (social interdependence, appropriate group pairing, and promotive interactions) collaborative learning should improve student's grades. In order to explore these questions and to potentially offer techniques which may help maximize the benefits of collaborative learning, I propose a quasi-experimental field study that introduces the concept of vested-interest learning. In what I call vested-interest learning, each student is paired with another student and a portion of the class time is allotted for the pairs to work together. In pairs, students can go through class material to encourage understanding of the content. A student's overall performance evaluation will reflect their degree of engagement in facilitating their partner's performance. Thus, each individual will have a *vested-interest* in making sure that their partner is learning and comprehending the course. Vested-interest learning makes each student responsible for teaching another, and by teaching another, it is hypothesized that students will gain a better understanding of the information taught in class than will their counterparts in traditionally taught collaborative learning classrooms. Applying principals from social psychology, in the form of vested-interest learning, to the collaborative learning data can strengthen the literature in collaborative learning by offering practical information on if, and under what conditions, collaborative learning is effective.

RESEARCH METHOD AND DESIGN

In order to explore the influence of vested-interest learning as an instructional technique on learning outcomes in collaborative settings, I have conducted a quasi-experiment in which two sections of introductory level sociology classes were taught concurrently by the same instructor. These classes were taught at a large, urban public university with a diverse enrollment of over 40,000. The classes consisted of identical instructional material and course layout and design, with the exception of the vested-interest feature present in the experimental group and absent from the control group. Both groups used course material from a typical and approved Introduction to Sociology textbook. The control group was taught using standard collaborative learning techniques, as described above, and the experimental group was set up in an identical fashion. However, in the experimental group, the students were informed that their performance evaluation would be based, in part, on how well they facilitated partner's learning, similar to traditional group work in which students must perform cooperatively to earn a shared grade. This gives them a stake in the performance of their peer.

Participants and Design

Subjects in this study consisted of two groups of participants from Introduction to Sociology classes at a large, urban university. Each group (experimental and control) initially consisted of 45 students, but due to attrition the class sizes were reduced to 43 in

the experimental group and 42 in the control group (n=42 control, n=43 experimental, n=85 overall sample). It is important to note that while the participants self-selected their courses during an open enrollment period, there was no knowledge of course content or experimental/control group differences prior to commencement of the course. Further, after explaining the syllabus and grading policies, no unusual drop rate was observed. Additionally, these classes met on the same days, twice per week in the afternoon, temporally separated by only one and a half hours, so there isn't any reason to believe that classes would differentially attract particular "types" of students.

Control/Experimental Group Demographics

The control group consisted of 42 students. In the control group there were 13 males and 29 females, 29 of whom were white students and 13 of whom were non-white students. Of these students 23 were majoring within the College of Arts and Sciences while 19 were majoring in other colleges. 7 students in this group had taken at least one other college level sociology class.

The experimental group consisted of 43 students. In the experimental group there were 14 males and 29 females, 24 of whom were white students and 19 of whom were non-white students. Of these students, 24 were majoring within the College of Arts and Sciences while 19 were majoring in other colleges. Six students in this group had taken at least one other college level sociology class (See Tables 1-4).

Table 1: Sex of Students Based on Group Placement

			Sex		Total
			Male	Female	
Grouping	Control	Count	13	29	42
		% within grouping	31.0%	69.0%	100.0%
	Experimental	Count	14	29	43
		% within grouping	32.6%	67.4%	100.0%
Total		Count	27	58	85
		% within grouping	31.8%	68.2%	100.0%

Table 2: Race of Students Based on Group Placement

			Race		Total
			White	Non-white	
Grouping	Control	Count	29	13	42
		% within grouping	69.0%	31.0%	100.0%
	Experimental	Count	24	19	43
		% within grouping	55.8%	44.2%	100.0%
Total		Count	53	32	85
		% within grouping	62.4%	37.6%	100.0%

Table 3: College of Students (Arts & Sciences or Other) Based on Group Placement

			College		Total
			Arts & Sciences	Other	
Grouping	Control	Count	23	19	42
		% within grouping	54.8%	45.2%	100.0%
	Experimental	Count	24	19	43
		% within grouping	55.8%	44.2%	100.0%
Total		Count	47	38	85
		% within grouping	55.3%	44.7%	100.0%

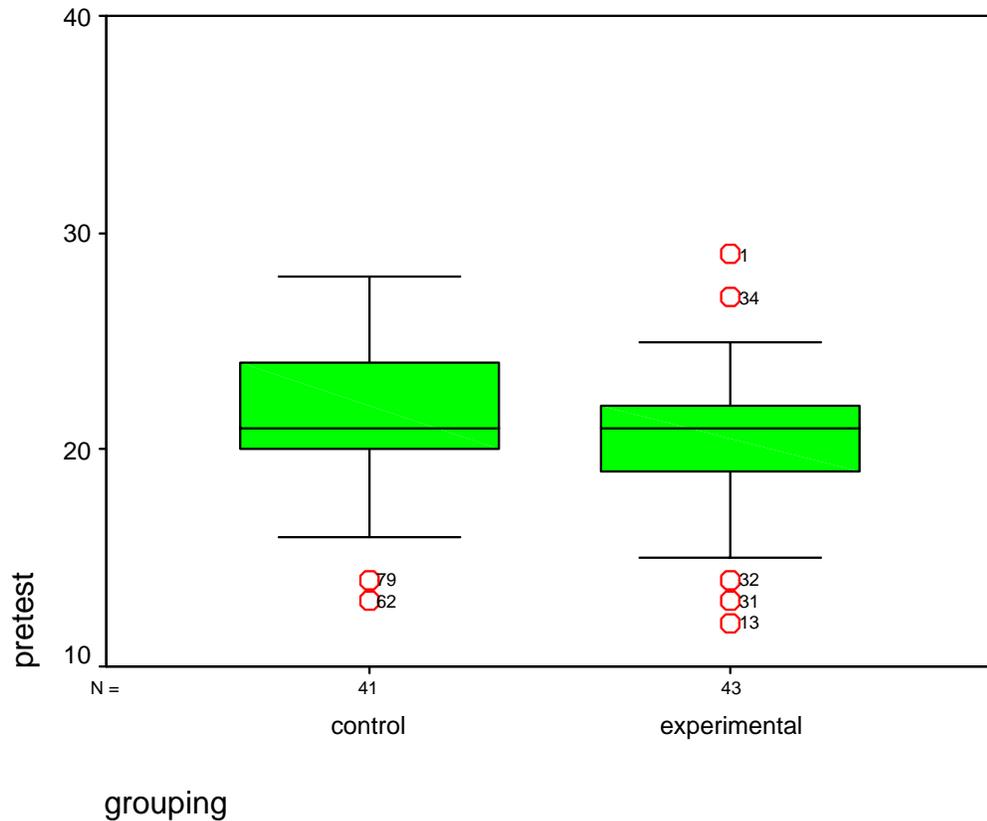
**Table 4: Previous Number of Sociology Classes Taken by Student
Based on Group Placement**

			Number of Previous Sociology Classes					Total
			0	1	2	3	4	
Grouping	Control	Count	35	6		1		42
		% within grouping	83.3%	14.3%		2.4%		100.0%
	Experimental	Count	37	4	1		1	43
		% within grouping	86.0%	9.3%	2.3%		2.3%	100.0%
Total		Count	72	10	1	1	1	85
		% within grouping	84.7%	11.8%	1.2%	1.2%	1.2%	100.0%

Pre-test

Students were assigned a teammate based on their scores on a preliminary exam, which served to determine their ability level prior to instruction in this course. This exam was multiple choice format, covering questions related to definitions or understandings of Introduction to Sociology level knowledge. Application questions were excluded from the exam on the basis that students could not adequately answer those questions without having knowledge of concepts first. The exam consisted of 37 questions. The scores on the pre-test ranged from (13-29) correct answers in the experimental class, and (14-28) in the control class (See Figure 1). In comparison to the control class, the experimental class had a slightly larger range of scores. The distribution of scores of the experimental class was negatively skewed, whereas the distribution of scores of the control group was positively skewed. However, this difference was not determined to be statistically significant.

Figure 1: Box Plot Showing Distribution of Pretest Scores Based on Group Placement



Matching Students

Approximately 50% of the groups were made up of heterogeneous or mixed ability pairs, and the other 50% were made up of homogenous or similar (“streamed”) ability pairs. To determine the students’ ability level, I looked at the statistics from the pre-test. Using simple statistical analysis such as mean and standard deviation, I measured “how much difference” constitutes a heterogeneous pair. The standard deviation for both classes was between 3 and 4 points, so homogenous pairs had two students that scored within 3 points difference from one another, and heterogeneous pairs

consisted of partners who were more than 4 points difference from one another. Based on this criterion, partners were selected randomly. Dividing students into these types of pairs provided a potential to indicate whether this technique would be beneficial to all students, or only students who were paired in a particular manner.

Control Group

Success in the course is based on student participation in group activities (determined by students' completing assignments given to the groups relating to students working with each other to teach [or help with understanding] material from the course); attendance (to ensure that group members are attending classes regularly); and two multiple choice (post) exams which will measure learning. The exams will determine student success in terms of this experiment. The exam questions will be taken from a test bank that accompanies the book of choice. Each post exam contains questions from the pretest, as well as others. The improvement on these repeat questions will show learning and retention.

Experimental Group

The experimental group was been taught exactly the same as the control group, with all assignments, activities, and exams identical in content. However, the grading of these classes was slightly different. In the experimental class, 15 percent of the students' overall course grade comes from the performance of his or her partner.

<p>Control Class</p> <p>Exam Score = _____</p> <p>X 100%</p>
--

<p>Experimental Class</p> <p>Exam Score = _____</p> <p>X 85%</p> <p>Partner's Score = _____</p> <p>X 15%</p>
--

The groups were treated differently in no other way. An outsider who was not aware of the experimental differences observed these classes on one occasion, and reported no differences in style or content.

Dependent Variables

Dependent variables in this study are primarily outcome variables in relation to the effect of vested-interest learning. The pretest used for each class was identical (see Appendix B). Although there is inevitably a chance in education that students from classes will gain information from others, I do not feel a threat to validity for the pretest because students were not anticipating the test, it came unannounced, and they were informed that they were being graded on completion only, so improving one's test score would not have improved that person's grade. The post tests were identical in content, although the ordering and formatting of the exams were different. Further, the experimental class was tested before the control class, so if exam information sharing was an issue, it would have skewed results in favor of the control group—however, due to the close proximity of these classes in terms of time, I did not find this to be a problem. Thus, the dependent variables analyzed are: pretest score (coded as number correct), pretest part 1 and pretest part 2 (since the final was not cumulative, I divided the pretest into 2 parts—the first part has questions that reappear on the midterm, the second part has questions that reappear on the final), midterm score (coded as number of questions taken from pretest part 1 that the student answered correctly), final exam score (coded as number of questions taken from pretest part 2 that the student answered correctly), pretest to midterm difference (coded as the actual numerical difference from pretest to midterm),

pretest to final exam difference (coded as the actual numerical difference from pretest to final), and final course grade (coded as actual final grade, in percentages).

Independent Variables

Specific research questions have been proposed in this study: Is vested-interest an effective technique in increasing the potential benefits of collaborative learning? Are there particular circumstances where vested-interest impacts learning outcomes? In order to address these questions, I am analyzing data from the three following independent variables: group placement (coded as experimental=1, control=2), placement of students in pairs (coded as homogenous=1, heterogeneous=2), and how much the participant liked their partner (coded as 1= “nothing/not at all”, 2= “not very much”, 3= “somewhat”, 4= “quite a bit”, 5= “very much”) against whether or not the vested-interest impacted the grade as a measure of positive interdependence and group overall performance.

Control Variables

In addition to grouping and types of pairs, other control variables considered and evaluated in this study include demographic data, such as gender (coded males=1, females=2), race/ethnicity (coded white=1, non-white=2), college (coded other major major=1, Arts & Science =2) as well number of previous sociology classes taken (coded as actual number of classes), to determine if there is a relationship with the grouping variable. By looking at these variables, it is possible to determine if vested-interest impacts certain categories of students more than others. Evaluating these variables may

also give teachers who use group assignments valuable information about pairing strategies that may or may not work best.

Ensuring Internal Validity

Several steps were taken throughout this study to maintain as much internal validity as possible during the experiment. First, the exam questions were objective, since objective grading is more quantifiable and standard in grading. Second, the exam questions were selected from a test bank. This essentially eliminated any possible threat to internal validity due to experimenter effect, since the instructor effectively removed herself from the process of determining the knowledge that needs to be demonstrated for successful course completion. Additionally, the control group and the experimental group have been taught using PowerPoint technology, so that all written information expressed in the classes is the same and no group has an advantage of more or different information. Lastly, as a protective measure looking to attest to internal validity, an external observer sat through each class on one occasion without knowing which was the experimental group and which was the control group, and reported no differences in style or information distributed.

Analysis of Data

Data were analyzed using the Statistical Software Package for the Social Sciences (SPSS 14.0). The following independent variables have been examined: group placement (experimental or control), pairing (heterogeneous ability pairs or homogeneous ability pairs), and partner liking in relation to the dependent variables (namely, the outcome

measures). Additionally, the following control variables have been analyzed: sex, race/ethnicity, college, number of previous sociology classes taken, and number of absences. Using crosstabs, T-tests, ANOVAs, and multiple regression analyses, I have analyzed these independent, dependent, and control variables to determine whether or not there is a statistical significance in student performance based on the teaching method I have proposed, or under what circumstances this method may be effective. The pre-test administered at the beginning of the course to determine student ability prior to instruction, and based on this I have been able to determine the amount of variance between the groups, and the amount of improvement over the span of the course. I tested the null hypothesis that instructional technique (collaborative versus collaborative with vested-interest) has no impact on student outcomes, which has given me the ability determine the effectiveness (or lack thereof) of the vested-interest learning technique and make recommendations about its usefulness or potential for further study.

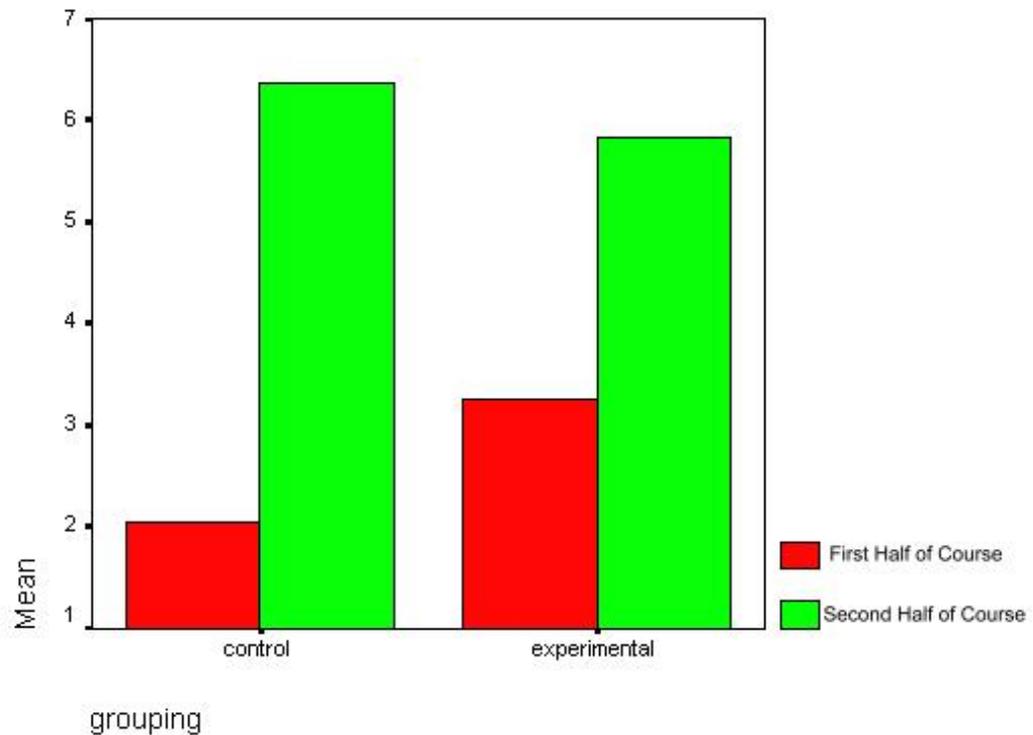
FINDINGS

Quantitative Findings

This vested-interest learning technique was determined not to have any statistical significance on the students' final grades $t(83)=-0.518, p=.606$. However, it did indicate that other factors involved in group work and collaborative learning might influence student outcomes or perceived student outcomes. Students in the experimental course exhibited more signs of anxiety about their grades, expressed more concern about their partners' abilities, and gave the instructor significantly lower ratings than the control class. However, students in the experimental class also came to class more often. These findings may indicate that placing a grade on group work, while effective in encouraging attendance, does not significantly alter the output of the group.

In the beginning of this experiment, students in the experimental group worked rigorously with their partners in an attempt to increase their own grades. There was a greater improvement in the experimental class' test scores from the pretest to the midterm exam $t(82)=-2.521, p=.014$ than the control class' test scores. The difference from the pretest to the final exam, however, did not show any significant difference (see Figure 2).

Figure 2: Amount of Improvement from First Half of Course; Second Half of Course, Based on Group Placement

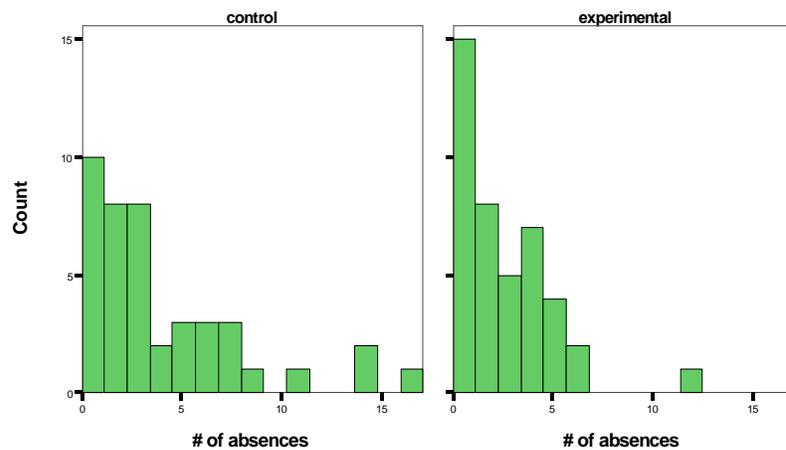


This could be either because the experimental group became less concerned about their partners' performance, or the control group became more concerned. Nonetheless, it seems to indicate that this vested-interest feature had an early advantage that wore off over the course of the semester. It could be reasonable to say that students respond well to this method for a while, but it could be more effective when used in combination with other methods.

An interesting finding in this study is the differences between groups' class attendance. In the experimental group, where partners worked together for a grade, attendance was significantly better than in the control group as demonstrated in a one-tail t-test: $t(82)=1.935, p=.028$ (see Figure 3). This may indicate that the students who had a

personal responsibility to another student (the experimental class) were more likely to come to class and exert an effort in the group work.

Figure 3: Absences Based on Group Placement



But again, the vested-interest feature, did not significantly increase the final grades in either course $t(83)=.518, p=.606$.

After considering these findings, multiple regression analyses were conducted to determine how much each variable impacted the learning outcomes. These analyses, presented in Table 5, test the initial question: “under which circumstances would vested-interest learning be effective?” The multiple regression analyses show that in the first half of the course, vested-interest impacted students’ grades ($p=.007$). Even when controlling for other variables (sex, race, college, previous number of sociology courses), vested-interest show a significant (although slightly less significant) relationship to student success ($p=.004$). In other words, those in the vested-interest learning classroom showed a greater increase in scores between the pretest and the midterm compared to the control classroom, independent of the students’ previous sociology classes, sex, race, or

college. Additionally, the students' pairing and degree of partner liking did not influence the significance of vested-interest learning ($p=.088$; $p=.233$ respectively), but number of absences did show a significant effect on student learning outcomes ($p=.009$). When controlling for all of these factors together, number of absences ($p=.011$) and vested-interest learning ($p=.028$) are the biggest indicators of student success (see Table 5).

Table 5: Net Relationships Between Vested-Interest Learning (Model I), Demographic Variables (Model II), Condition Variables (Model III), and Learning Outcomes Attained During First Half of the Semester

	Model I	Model II	Model III
<u>Block One</u>			
Vested-Interest	.302	.220	.238**
<u>Block Two</u>			
Female		-.025	-.050
Non-White		-.187	-.128
Arts & Sciences		-.073	-.071
Previous Sociology Courses		-.187	.189
<u>Block Three</u>			
Homogeneously Paired			.172
Degree of Partner Liking			.097
Number of Absences			-.276*
r^2 values	.091	.172	.282

* $p=.05$, ** $p=.01$, *** $p=.001$

In the second half of the semester, the effect of vested-interest learning seemed to have waned, as the ANOVA and multiple regression analysis presented in Table 6 shows ($p=.406$). This could be because students realized that vested-interest learning was not influencing their grades as much as they initially expected it to, or they may have felt that if their partner was affecting their grade, they were not able to control that. These are

only speculations based on the data, but other information from the second half of the course is evident. For example, student attendance remains a significant predictor of success ($p=.019$). Even when taking all variables into account (grouping, sex, race, college, previous number of sociology classes taken, pairing, and degree of partner liking) number of absences still accounts for a large portion of success as determined by student learning outcome measures ($p=.037$) (see Table 6).

Table 6: Net Relationships Between Vested-Interest Learning (Model I), Demographic Variables (Model II), Condition Variables (Model III), and Learning Outcomes Attained During the Second Half of the Semester

	Model I	Model II	Model III
Block One	-.094	-.073	-.122
Vested-Interest			
Block Two			
Female		.231	.206
Non-White		-.079	-.035
Arts & Sciences		-.084	-.068
Previous Sociology Courses		-.004	-.020
Block Three			
Homogeneously Paired			.051
Degree of Partner Liking			-.003
Number of Absences			-.242*
r^2 values	.009	.066	.124

* $p=.05$, ** $p=.01$, *** $p=.001$

As shown in a multivariate regression analysis presented in Table 7, in overall learning throughout the semester (sum of first half of course and second half of course), vested-interest was not a statistically significant way of increasing student learning outcomes ($p=.246$). However, number of absences is highly significant in determining student learning outcomes ($p=.001$). When taking all other variables into consideration,

attendance is still the highest predictor of success ($p=.002$) (see Table 7). These findings are consistent with previous studies on the positive impact that regular attendance has on student learning outcomes (Durden and Ellis 1995; Devadoss and Foltz 1996; Marburger 2001; Dolton, Marcenaro and Navarro 2003; Kirby and McElroy 2003). This may indicate that vested-interest learning is more effective when students are attending classes regularly. It can also be inferred from this data that vested-interest may be a way for instructors to increase their class attendance.

Table 7: Net Relationships Between Vested-Interest Learning (Model I), Demographic Variables (Model II), Condition Variables (Model III), and Learning Outcomes Attained During the Full Semester

	Model I	Model II	Model III
<u>Block One</u>			
Vested-Interest	.131	.159	.069
<u>Block Two</u>			
Female		.149	.115
Non-White		-.179	-.109
Arts & Sciences		-.108	-.096
Previous Sociology Courses		-.126	-.139
<u>Block Three</u>			
Homogeneously Paired			.150
Degree of Partner Liking			.062
Number of Absences			-.359**
r^2 values	.017	.091	.237

* $p=.05$, ** $p=.01$, *** $p=.001$

Students expressed varying degrees of concern regarding their partners throughout the course (see qualitative findings). It was interesting that when asked to rate how well they liked their partners, students in the experimental group rated their partners higher ($M=4.40$ on a scale from 1-5) than the control group ($M=3.67$), $t(83)=-$

2.873, $p=.003$. When comparing how well the each student liked his or her partner against pairing (homogenous or heterogenous) no significant difference was found whatsoever between homogenous pairs ($M=4.15$ on a scale from 1-5) and heterogeneous pairs ($M=4.15$) $t(83)=.015$, $p=.988$.

Students also expressed different views of the instructor based on their group placement (control/experimental). In the final course evaluations, the instructor was rated significantly higher by the control class when asked to rate the instructor's ability to communicate ideas and information ($M=4.97$ control, $M=4.72$ experimental on a scale of 1-5) $t(69)=2.127$, $p<.001$. When asked to rate the instructor's ability to facilitate learning, however, students reported no significant difference ($M=4.91$ control, $M=4.72$ experimental on a scale of 1-5) $t(69)=1.444$, $p=.153$. The overall rating that the students gave to the instructor were proven to be significantly different ($M=5.0$ control, $M=4.82$ experimental on a scale of 1-5) $t(69)=1.824$, $p=.036$.

Qualitative Findings

While these data cannot be backed with numbers or statistical findings, it may be of interest to add that some qualitative differences between the classes were noted. At the end of the class, a satisfaction survey was administered in which students were given the option of writing additional comments. Some examples of comments from the control class include:

- ✧ “The partners were a good way to make everyone feel comfortable about asking questions.”
- ✧ “I would have liked to pick my own partner, not have pre-selected ones.”

- ✧ I liked working with my partner because “surprisingly, if I did not understand something in class my partner or the teacher helped me a lot to understand the materials.”

Some examples of comments from the experimental class include:

- ✧ “We should have 2 partners instead of 1.”
- ✧ “We should be able to switch partners if we want to since some people don’t work well with partners.”
- ✧ “I don’t think my grade should be based on my partner’s. I liked my partner and we worked well together, but what if I wasn’t that lucky and got someone who never did [work] or come to class.”
- ✧ “I would like my partner’s success not to influence mine because it hurt my grade.”
- ✧ “I liked working with a partner because it forced me to review my notes.”
- ✧ “I don’t like my partner’s grade giving me points because I don’t think that I should be punished for their mistakes.”

Interestingly, no student actually suffered in terms of his or her final grades based on partner performance. Additionally, there was no significant difference between the mean final course grades between the control and experimental classes $t(83)=.518, p=.606$.

However, in the experimental class, students felt that a portion of their grade was outside of their control, which seemed to create a sense of hostility and anxiety toward the group work assignment. This finding can be reflected in the quantitative findings discussed previously. For instance, in the final course evaluations, the instructor was rated significantly higher by the control class when asked to rate the instructor’s ability to

communicate ideas and information (M=4.97 control, M=4.72 experimental on a scale of 1-5) $t(69)=2.127$, $p<.001$. The overall rating that the students gave to the instructor did yield a significant difference (M=5.0 control, M=4.82 experimental on a scale of 1-5) $t(69)=1.824$, $p=.036$. These findings imply that students in the control class were more comfortable with the class format (instructor's ability to communicate ideas and information) and were more comfortable with the instructor when they were in a situation where they did not feel that the instructor was putting a part of their grade outside of their control. It can also be noted that since the attendance was significantly better in the experimental class than in the control class, a portion of the course evaluations might be reflecting dissatisfaction in that respect. This postulation, however, is speculation based on the data which has no gauge for measurement in this study.

DISCUSSION AND CONCLUSION

This study has found that vested-interest may be a valid collaborative classroom technique when used in conjunction with various implementations of collaborative assignments. However, this study revealed that vested-interest alone is not enough to significantly raise students' learning outcomes. More importantly, this study reveals that there are specific conditions when vested-interest learning is most effective, and that vested-interest may create certain classroom conditions that could potentially improve or hinder class performance. Attendance, based on the data in this study, has the greatest impact on students' grades. Both vested-interest learning and attendance (which was greater in the vested-interest class) show significant net relationships to student learning outcomes. Therefore, based on these data, vested-interest learning does have an initial positive impact on student learning outcomes and it can be inferred that students will perform the best (at least initially) if they are in a vested-interest learning classroom and they are attending class regularly. Even when the effect of vested-interest dissipates, attendance still influences student learning outcomes.

This study makes a significant contribution to the literature on cooperative/collaborative learning by applying social psychological principles of group interactions to already established theoretical frameworks in education. These findings may have additional implications for group projects. In situations where all students in a group are assigned a single group grade, it may be the case that classroom dynamics change, as students feel that other students impact their grades. The qualitative findings

in this study should be considered by anyone using groups in their classrooms or researchers looking at group dynamics. This study calls for more research applying social psychology to collaborative learning environments to help give a better understanding of what conditions or circumstances allow vested-interest, or group work with a shared grade, to be considered effective.

One of the limitations of this study is that there was no group that was taught using no collaborative exercises. Future research may wish to address this in an effort to compare the effects of collaborative learning with non-collaborative learning in addition to the vested-interest feature, or non-vested-interest being present in class. Additionally, after determining ability levels of students, this study used a random selection criteria to place students in pairs. Future research may wish to allow students to self-select their partners as a way to possibly decrease the overall class anxiety of working with an unknown person. This study also has broad implications for future research. For instance, this study looked at individual data in order to come to conclusions about the effects of vested-interest learning, but future research could explore pairs as units of data analysis in an effort to determine whether there is a net effect of vested-interest that could help explain its results. Another possible implication for research could be the differences between actual learning outcomes and perceived learning outcomes related to vested-interest. As stated earlier, even though there were no significant differences in the students' final grades, students in the vested-interest group seemed more concerned and anxious about their grades, and some felt that partners hurt their individual performance. These areas remained largely unexplored in this study, but future research may determine interesting effects of vested-interest by investigating these proposed guidelines.

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APPENDICES

Appendix A: Coded Values for Variables Used in SPSS Analysis

<u>Independent Variables</u>	<u>Variable Name</u>	<u>Actual Coded Values</u>
Grouping (Experimental; vested interest or Control; non-vested interest)	grouping	1=experimental 2=control
Pairing (homogeneously or heterogeneously paired)	pairing	1=homogeneous 2=heterogenous
Partner Liking (How well each student rated liking his/her partner)	partlike	1= “nothing/not at all” 2= “not very much” 3= “somewhat” 4= “quite a bit” 5= “very much”

Appendix A (Continued)

<u>Dependent Variables</u>	<u>Variable Name</u>	<u>Actual Coded Values</u>
Pretest	pretest	Coded as actual score
Pretest Part 1 (material that would be revisited in the first half of the course)	ptpt1	Coded as actual number answered correctly for this portion
Midterm Exam	midterm	Coded as actual score
Pretest to Midterm Difference (change in scores from pretest part 1 to midterm)	ptmiddif	Coded as actual point difference
Pretest Part 2 (material that would be revisited in the second half of the course)	ptpt2	Coded as actual number answered correctly for this portion
Final Exam	final	Coded as actual score
Pretest to Final Difference (change in scores from pretest part 2 to final)	ptfindif	Coded as actual point difference
Final Grade	fin_grad	Coded as actual final grade

Appendix A (Continued)

<u>Control Variables</u>	<u>Variable Name</u>	<u>Actual Coded Values</u>
Sex	sex	1=male 2=female
Race (As answered on a voluntary survey, using the same categories as the US census)	race	1=white 2=nonwhite (coded this way due to the relatively small numbers of each minority group represented)
College	college	1= other 2= Arts & Sciences
Previous Number of Sociology Classes Taken	previous	Coded as actual number of classes taken
Number of Absences	absences	Coded as actual number of classes missed

1. name = Student's name (removed from data set for privacy purposes)
2. sex = Student's sex
3. race = As answered on a voluntary survey, using the same categories as the US census (recoded as white/non- white due to small percentages of each minority group represented)
4. class = Progress through academic program
5. college = A student of the College of Arts & Sciences or other
6. previous = Number of previous sociology classes taken
7. pairing = Paired with a similar ability partner (homogenous) or a different ability partner (heterogeneous). Some students have missing information here because they failed to take the pretest.
8. pretest = Overall score on pretest, out of 37 possible

Appendix A (Continued)

9. ptpt1 = Since the final was not cumulative, I divided the pretest into 2 parts- the first part has questions that reappear on the midterm, the second part has questions that reappear on the final. This is "Pre-Test part 1, out of 18 possible"
10. midterm = number of questions (from variable #9) that the student actually got correct. Also out of 18 possible.
11. ptmiddif = Difference from Pre-Test to Midterm. (Variable #10 minus variable #9.) This should show improvement from Pre-test to Midterm.
12. ptpt2 = Second half of the pre-test from which questions reappeared on the Final. Out of 15 possible.
13. final = Number of questions (from variable #12) that the student actually got correct. Also out of 15 possible.
14. ptfindif = Difference from Pre-Test to Final. (Variable #13 minus variable #10.) This should show improvement from Pre-test to Final.
15. absences = Number of classes missed by each student.
16. = experimental group or control group. Course section #005 is experimental, #007 is control.
17. partlike = the rating that each student gave their partner on the question "How much do you like your partner?" from 1-5 on a standard Lickert scale with 1 being very little and 5 being very much.
18. fin_grad = the final course grade that this student received (numerical value).

Appendix B: Pretest Exam Used to Establish Pair Placement

Pre-test

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- ___ 1. Which of the following statements is TRUE?
 - a. Culture and social structure are synonymous.
 - b. Culture and society are synonymous.
 - c. Culture is limited to the arts, music, and literature.
 - d. Culture is what makes humans unique in the animal kingdom.
- ___ 2. Socially shared ideas about what is right are called:
 - a. ideas
 - b. ideologies
 - c. norms
 - d. values
- ___ 3. The tendency to judge other cultures as inferior in terms of one's own norms and values is termed:
 - a. cultural imperialism
 - b. cultural relativity
 - c. cultural stereotyping
 - d. ethnocentrism
- ___ 4. A socially-defined position in a group is a:
 - a. social boundary
 - b. social marker
 - c. status
 - d. structural location
- ___ 5. The way in which society defines how an individual is to behave in a particular status is a:
 - a. normative obligation
 - b. role
 - c. sanction
 - d. status set
- ___ 6. A position or rank that is assigned to a person at birth and cannot be changed is:
 - a. a closed status
 - b. a fixed status
 - c. an achieved status
 - d. an ascribed status
- ___ 7. The shaping of behavior through reward or punishment is called:
 - a. conditioning
 - b. identity reinforcement
 - c. modeling
 - d. symbolic representation

Appendix B (Continued)

- ___ 8. In the opinion of many, the most controversial agent of socialization in American society is the:
- community
 - mass media
 - peer group
 - School
- ___ 9. Which of the following is the BEST example of a primary group?
- a classroom
 - a family
 - an office
 - people stranded in an airport
- ___ 10. A group that consists of two members is a:
- dyad
 - primary group
 - secondary group
 - triad
- ___ 11. The ways in which a society prevents deviance and punishes deviants are known as:
- law enforcement agencies
 - moral entrepreneurs
 - normative systems
 - social control
- ___ 12. An act or omission of an act for which the state can apply sanctions is called:
- a crime
 - anomie
 - deviance
 - stigma
- ___ 13. The probability that a person who has served a jail term will commit additional crimes and be jailed again is called:
- backsliding
 - recidivism
 - recrimination
 - retrogression
- ___ 14. The division of the members of a society into layers based on such attributes as wealth, power, and prestige is termed:
- homogenization
 - social stratification
 - status differentiation
 - status sorting
- ___ 15. Material objects or behaviors that indicate social status or prestige are:
- deference patterns
 - identity markers
 - status indicators
 - status symbols

Appendix B (Continued)

- ___ 16. Which of the following resources is most equally distributed throughout the U.S. population?
- education
 - income
 - power
 - wealth
- ___ 17. The term referring to the biological differences between males and females is:
- anatomy
 - destiny
 - gender
 - Sex
- ___ 18. When mothers teach their daughters to behave in "feminine" ways, they actually are teaching them:
- ancillary roles
 - androgynous roles
 - gender roles
 - subordinate roles
- ___ 19. An ideology that justifies prejudice or discrimination based on gender is referred to as:
- ageism
 - nativism
 - racism
 - sexism
- ___ 20. Race is essentially a:
- religious ideology
 - geographic concept
 - social concept
 - mathematical principle
- ___ 21. The civil rights movement was a struggle to gain
- educational freedom
 - equality of opportunity
 - occupational opportunities
 - right to own property
- ___ 22. The population of Native Americans in North America was reduced from over four million in the eighteenth century to below 600,000 in the early twentieth century as a result of:
- affirmative action
 - amalgamation
 - assimilation
 - genocide
- ___ 23. In the modern world, economic resources are increasingly controlled by:
- colonial powers
 - government agencies
 - great empires
 - multinational corporation

Appendix B (Continued)

- _____ 24. The ability to control the behavior of others, even against their will, is termed:
- authority
 - coercion
 - influence
 - power
- _____ 25. Power whose exercise is governed by the norms and statuses of institutions is referred to as:
- authority
 - coercive power
 - influence
 - permissive power
- _____ 26. The time required for social institutions to adapt to major technological change is referred to as:
- cultural lag
 - cultural regression
 - structural disequilibrium
 - technological dualism
- _____ 27. Initially, hospitals were:
- military establishments
 - penal colonies
 - religious centers
 - workhouses
- _____ 28. A group of people related by blood, marriage, or adoption is referred to as a:
- consanguine group
 - family
 - kinship network
 - sibling set
- _____ 29. Which of the following is the most frequently reported issue in American policing?
- murder
 - burglary
 - rape
 - domestic violence
- _____ 30. Any set of coherent answers to the dilemmas of human existence that makes the world meaningful is called:
- a church
 - a cognitive map
 - an ideology
 - a religion
- _____ 31. The term used to describe phenomena that are not considered sacred is:
- holy
 - mundane
 - profane
 - Secular

Appendix B (Continued)

- ___ 32. Tracking programs in educational institutions are thought to contribute to:
 - a. educational success for all students.
 - b. educational inequality.
 - c. educational equality.
 - d. none of these

- ___ 33. The increase in the number of private communities is an indication of
 - a. community revisioning
 - b. urban renewal
 - c. gentrification
 - d. fear of urban life

- ___ 34. Life expectancy is defined as
 - a. the number of years one lives
 - b. the number of years one plans to live
 - c. the number of years one can expect to live
 - d. the difference in life span and life years

- ___ 35. Which of the following refers to the effects of society on the natural environment?
 - a. environmental stress
 - b. pollution
 - c. structural disequilibrium
 - d. technological displacement

- ___ 36. An intentional effort by a group to create new institutions or reform existing ones is a:
 - a. protest movement
 - b. revolution
 - c. riot
 - d. social movement

- ___ 37. Compared to today, war historically
 - a. was more devastating
 - b. was less devastating.
 - c. used more sophisticated technology.
 - d. used more women warriors.

Appendix B (Continued)

Pre-test Answer Section

MULTIPLE CHOICE

1. ANS: D
2. ANS: D
3. ANS: D
4. ANS: C
5. ANS: B
6. ANS: D
7. ANS: A
8. ANS: B
9. ANS: B
10. ANS: A
11. ANS: D
12. ANS: A
13. ANS: B
14. ANS: B
15. ANS: D
16. ANS: A
17. ANS: D
18. ANS: C
19. ANS: D
20. ANS: C
21. ANS: B
22. ANS: D
23. ANS: D
24. ANS: D
25. ANS: A
26. ANS: A
27. ANS: C
28. ANS: B
29. ANS: D
30. ANS: D
31. ANS: C
32. ANS: B
33. ANS: D
34. ANS: C
35. ANS: A
36. ANS: D
37. ANS: B

Appendix C: Voluntary Survey Questionnaire Used to Gather Demographic Data on Students

Name: _____

Student ID Number: U_____

Educational Data

Class Standing at the BEGINNING of this semester: (check one)

- Freshman
- Sophomore
- Junior
- Senior
- Non-Degree Seeking

Your Course Load: (check one)

- Full-time (12 credit hours or more)
- Part-time (Less than 12 credit hours)

Your College: (check one)

- Architecture & Community Design
- Arts & Sciences
- Business Administration
- de la Parte Institute (FMHI)
- Education
- Engineering
- Health Sciences
- Honors College
- Marine Science
- Medicine
- Nursing
- Public Health
- Visual & Performing Arts
- Other: _____

Please list all of the previous SOCIOLOGY classes you have taken:

Appendix C (Continued)

Your Major: (Circle One)

Accounting	Geology	Mass Communications
Africana Studies	Gerontology	Mathematics
American Studies and Humanities	Government and International Affairs	Mechanical Engineering
Anthropology	History	Medical Technology
Applied Sciences	Honors College Research	Microbiology and Biology
Art Studio and Art History	Hotel and Restaurant Management	Music
Athletic Training/Sports Medicine	Industrial & Management Systems Engineering	Music Education
Biology & Microbiology	Information Systems	Music Studies
Biomedical Science	Information Technology	Nursing
Chemical Engineering	Interdisc Classical Civilizations	Philosophy
Chemistry	Interdisciplinary Natural Science	Physical Education
Civil and Environmental Engineering	Interdisciplinary Social Sciences	Physics
Classics	International Business	Political Science
Communication	International Studies	Pre-Law
Communication Sciences and Disorders	Liberal Studies	Pre-Medical, Pre-Dental, & Pre-Veterinary
Computer Science and Engineering	Management	Psychology
Criminology	Management Info. Systems	Religious Studies
English	Marketing	Secondary Education
Environmental Science and Policy	Dance	Social Work
Finance	Dance Studies	Sociology
Foreign Languages	Early Childhood Education	Special Education
General Business Administration	Economics	Technical Education
Geography	Electrical Engineering	Theatre
	Elementary Education	Women's Studies
		Other _____

Appendix C (Continued)

Personal Data:

Your Date of Birth: _____ / _____ /19 _____
Month Day Year

Your sex: (check one)

- Male
- Female

Are you Spanish/Hispanic/Latino? Mark the "No" box if **not** Spanish/Hispanic/ Latino.

- No, not Spanish/Hispanic/Latino
- Yes, Mexican, Mexican Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino — *Print group.*

What is your race? Mark one or more races to indicate what you consider yourself to be.

- White
 - Black, African Am., or Negro
 - American Indian or Alaska Native — *Print name of enrolled or principal tribe.*
-
-

- Native Hawaiian
 - Guamanian or Chamorro
 - Samoan
 - Other Pacific Islander — *Print race.*
-
-

- Asian Indian
- Chinese
- Filipino

Appendix C (Continued)

- Japanese
- Korean
- Vietnamese

Continued on next page.....

- Other Asian — *Print race.*

- Some other race — *Print race.*

What is your marital status?

- Now married
- Widowed
- Divorced
- Separated
- Never married

What is your ancestry or ethnic origin?

(For example: Italian, Jamaican, African Am., Cambodian, Cape Verdean, Norwegian, Dominican, French Canadian, Haitian, Korean, Lebanese, Polish, Nigerian, Mexican, Taiwanese, Ukrainian, and so on.)

Do you speak a language other than English at home?

- Yes
- No

b. What is this language? _____

(For example: Korean, Italian, Spanish, Vietnamese)

Appendix C (Continued)

c. How well do you speak English?

- Very well
- Well
- Not well
- Not at all

Where were you born?

- In the United States — *Print name of state.*

- Outside the United States — *Print name of foreign country, or Puerto Rico, Guam, etc.*

Appendix D: Survey Questionnaire, Including Item Wordings and Coded Values From Which Variables Used in Analysis are Taken

Please answer the following questions as honestly as possible. Your answers will not affect your grade- you will receive credit for completion. Do not feel like you will be judged for your answers – I am seeking your honest input for several reasons. First, this will help me develop future courses. Second, I hope to find out if activities and information in this class have been useful to you.

Using a scale of 1-5, with 1 meaning “nothing/not at all,” 2 meaning “not very much,” 3 meaning “somewhat,” 4 meaning “quite a bit,” and 5 meaning “very much,” please answer the following questions:

1. How much do you feel you knew about Sociology before the first day of class?

(circle one)

1 2 3 4 5

2. How much do you think you know now?

1 2 3 4 5

3. How much or how often can you apply things from this class to your life?

1 2 3 4 5

4. How much did you like the videos and media clips?

1 2 3 4 5

5. How much did you like your partner?

1 2 3 4 5

Write comments in the spaces provided:

6. If I could change anything about the class, it would be _____

because _____

Appendix D (Continued)

7. If I could keep something about the class the same, it would

be _____ because _____

8. To improve the Clarification Question assignments, the best thing to do would

be _____

9. Any other feedback you'd like to provide?

Appendix E: Instructor Evaluation Ratings – Including Wordings and Coded Values From Which Variables Used in Data Analysis are Taken

<u>Survey Question</u>	<u>Variable Name</u>	<u>Actual Coded Values</u>
Description of course objectives and assignments	rating1	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Communication of ideas and information	rating2	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Expression of expectation for performance	rating3	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Availability to assist students outside of class	rating4	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Respect and concern for students	rating5	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Stimulation of interest in course	rating6	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor

Appendix E (Continued)

Facilitation of learning	rating7	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor
Overall rating of instructor	rating8	5=Excellent 4=Very good 3=Good 2=Fair 1=Poor