

Small Groups: Effectiveness in a University Classroom

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Abstract: *Previous studies demonstrate that working in small teams enhances each group member's self-learning capabilities and that academic marks improve when compared to traditional learning methodology. The purpose of this study is to understand the effectiveness and ineffectiveness of working in small groups in classrooms, gender roles and program majors. The present survey (N=138) reports on the effectiveness and ineffectiveness of working in small groups on assignments and projects in college level courses. Using a self-reporting paper-and-pencil instrument, the researcher asked if the respondents have had the opportunity to work in a small group's and how they felt about the outcome and success of the project assigned to the group, if they learned from working with the small group and if the goals were met when working in groups. It also asked if they believed that they would have been more effective in completing the work if they had worked alone. The students completing this survey were Hispanic and all students at a university in the southernmost region of Texas*

Keywords: *gender roles in groups, group relationships, small groups*

1. Introduction

Small working groups have been collaborating on many work and school related projects for centuries. Everyone has been involved in working in a small group at some point in their lifetime. People have different ideas or philosophies regarding how work should be done. There are few people that like working alone and then there are those that enjoy working in groups for every project or assignment.

Small group work helps its members to develop cooperative skills such as listening and communication skills, interpersonal skills, problem solving techniques, analytical skills and members learn to share tasks to accomplish completing the goal of the group. Small working groups can also help its members increase their confidence because it is easier to feel comfortable in sharing ideas with team members because the size of the group is small and intimate. It makes it a comfortable environment. Learning in small groups helps students because it gives them a sense of willingness to share ideas and then also helps provide feedback from other group members.

There are many advantages and disadvantages to working in small groups. Some of the other advantages is that members are able to collaborate and tackle larger and more complex problems and assignments than they would be able to if they were working on their own as an individual. This also gives group members the opportunity to use their strengths such as expertise, skills and knowledge to help the group to accomplish their goal. Another benefit is that students or employees hold one another accountable and responsible for completing the work assigned. Unfortunately, there are also some disadvantages when working in groups and some of those issues may be things such as time consuming, inequality of work or unequal participation, the decision-making process may take a little longer because there may be too many opinions or dominating personalities and staying on task can be difficult because there are too many distractions.

Gender roles are also important in a working group because the patterns of behaviors, attitudes and learning are different. Myaskovsky, Unikel and Dew (2005) conducted a study about effects of gender diversity on performance in small groups and one part of the study concluded that women were less talkative and less task oriented in mixed gender groups than in groups where there were the only women. For the men, it was concluded that men were more talkative in groups where there were only men in groups. Furthermore, it found that men were more task oriented in mixed gender groups than in groups where men were the majority.

The small group—committee, work groups, task forces, management teams—is a primary arena in which influence behavior occurs. Growing body of evidence suggest links among evolved psychological and physiological mechanisms, sex differences in social behavior, and the interpersonal context of the small group (Geary, 1998; Maccoby, 1998). According to Colarelli, Spranger and Hechanova (2006), trait theory and social role theory provide alternative perspectives on the etiology of sex differences in social behaviors. It suggests that traits primarily influence how people respond to social situations. Men, on average, have more of a particular trait than women, men will behave differently than women (Browne, 2002). These traits are difficult to change because they have been practiced since childhood, but with training, people can develop certain traits they lack and the those traits can be learned.

From the study by Colarelli, Spranger and Hechanova (2006), four patterns emerged from the studies reviewed. First, regardless of the type of group, sex composition affected group dynamics and influence strategies, and the effects appeared stronger in naturally occurring than experimentally created groups. The behavior in all-male groups was more aggressive, competitive, and exploitative and was steeper dominance hierarchies. In mixed-sex groups, men were more dominant than women.

Having a group that is diverse of men and women may be more effective than single-sex groups in some circumstances (Shrader, Blackburn, & Illes, 1997). Mixed-sex groups will bring a variety of skills to the group and will assist in being more cooperative, will expand perspectives and be more productive.

Canary and House (1993), reviewed and summarized fifteen representative meta-analyses of sex differences which included over 1,200 studies on sex difference. They concluded that there are few, if any, differences in the manner in which men and women communicate and they indicate that sex differences in social interaction are small and inconsistent; that is, about 1% of the variance is accounted for and these effects are moderated by other variables. A mixed gender group is determined to be more successful than a group that has only one gender.

Rehman and Hinojosa (2016) developed an instrument to study the Hispanic-American student's attitudes towards group work. A study that concluded that their sample help strongly-negative to negative attitudes towards group work, however 91 percent of their respondents admitted that the group projects were completed and over 60 percent agreed that they would have done better had they received trained in group work and if the assignments were better structured.

2. The Study and the Sample

The study (N=138) reports on relationships in small working groups. The respondents were enrolled at a state-supported university in mid-size urban city in Texas bordering with Mexico. The data was collected in the spring of 2019. Since the university primarily caters to the Hispanic-American population, it is safe to assume that there was cultural homogeneity in the sample.

The data was collected through an anonymous, self-administered paper-and-pencil test where the participation was voluntary and the respondents were not required to disclose any personal identification. The instrument was composed of both closed-ended questions and open-ended questions. The seven closed ended questions were mainly demographic questions about gender, age, college major, relationship status, etc. There were five questions that were answered using a Likert scale about group work and one open-ended question describing group work experience.

The sample consisted of 138 (39.1%) men and 84 (60.8%). The age of the respondents ranged from 20 and younger to over 30 years. The sample was divided into four age groups. The first age group consisted of respondents that were 20 years old or younger and 35 (25.3%) were in this group. The second age group was made up of students between the ages of 21 years to 25 years and 79 (57.2%) were in this group. The third group consisted of students between the ages of 26 years and 30 years and 19 (13.7%) students were in this group. The remaining group or fourth group were students over 30 year of age and 5 (3.6%) people were in this group. The sample also consisted of 55 (39.8%) respondents that were communication/education majors and 83 (60.1%) respondents that were business/science majors. In addition, 71 (51.4%) respondents were single, 59 (42.7%)

were in a relationship, 8 (5.6%) were married and no respondents were separated or divorced. All 138 respondents were Hispanic American university students.

We also asked the respondents to rate on a scale from 1 (strongly agree) to 7 (strongly disagree) about group work. The questions asked were as follows:

- 1) If you want something done, do it yourself. Someone else is likely to do it incorrectly.
- 2) I welcome the opportunity to work in a group.
- 3) I work much better by myself.
- 4) Group work or group projects are wasteful when it comes to really important issues.
- 5) Most learning groups will be ineffective unless students are taught how to work in groups.
- 6) What were some of your experiences with learning groups/group projects that you have had or know of someone else has had.

We created two null hypotheses to test the data on two variables: Gender and Major/Discipline of Study. We hypothesized:

1. There is no difference between men and women in group work.
2. There is no difference in major/discipline of study in group work.

3. Findings

In our gender results, our findings found that women collaborate more than men when working on projects in small groups. In the sample size of men (n=54), the cooperative index mean was 0.4444 and the standard deviation was 2.3993 and for women (n=84), the cooperative index mean was 1.6667 and the standard deviation was 2.1664. The t-test calculation results were 3.1017. It was significant at 0.0023 and the two-tailed p-value equals 0.0023. Therefore, how men and women work in small groups by conventional criteria, was statistically significant.

In the results by major, the majors were sorted into two groups. The group one was communication and education majors (n=55) and group two was business and science majors (n=83). For the communication and education major the average mean was 1.5818 and the standard deviation was 2.3247. For the business and science majors, 0.9277 was the average mean and the standard deviation was 2.3106. The two tailed p-value equals 0.1066 and by conventional criteria, this difference is considered to be not statistically significant.

The results in the questions rated by using a Likert scale are as follows. Question 6, If you want something done, do it yourself. Someone else is likely to do it incorrectly. Women do not agree because they believe that we need to work together as a team (4.4) and men tend to agree that men are more self-reliant (5.5). The t-value >3.6200 and p-value was 0.0004. There was a significant correlation. Question 7, I welcome the opportunity to work in a group, men scored 4.9444, standard deviation 1.7848 and women scored 5.5000, standard deviation 1.4185. The t-value was 2.0270, p-value is 0.0446. Therefore, it was significant. Question 8, I work much better by myself, the t-value results were 2.2.539 and the p-value was 0.0258. Therefore, this was also significant. The results in Question 9, Group work or group projects are wasteful when it comes to really important issues were not significant. For Question 10, Most learning groups will be ineffective unless students are taught how to work in groups, the t-value was 1.0361 and p-value was 0.3020. Therefore, it was not significant. For question 11, What were some of your experiences with learning groups/group projects that you have had or know of someone else has had. The responses were categorized into the following eight categories.

1. No problems
2. Uneven participation
3. Some good/Some bad
4. I did all or most of the work

5. Free riders
6. Learn new things
7. Indifferent or uninterested
8. Social loafing

For both men and women, the top category selected was that they had no problems. The second category selected by both genders was that they experienced uneven participation from group members and the third category selected was that there were some good and some bad experiences. Both men and women were very similar in their responses except that more men experienced more free riders in their groups than women. Pearson correlation value of $r_s=0.81857$; p (2-tailed) 0.00698, therefore, this was significant.

4. Conclusion

This paper has stressed the importance of group work in college classrooms. The advantages and challenges associated having students work with others on projects and assignments while in college. To plan a group assignment, faculty members should think of the membership of the group. Membership includes mixed gender, age, etc. Since our analysis was focused on two variables: Gender or Major, the data revealed that there was a difference in how university students collaborated in a small group when assigned a group project or task. For future research, it may be interesting to look at working group relationships with members from different ethnic and cultural backgrounds.

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