

# A Study of Team Performance in Business Communication: Can the FIRO-B Help?

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## Abstract

This study was initiated to give students an understanding of how to manage the personalities within a team. The project involved the Business Communication students of three instructors. Student groups were used to test the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) as a tool for improving writing teams. The control group performed better on the team writing exercise and on certain dimensions of the team climate questionnaire. The FIRO-B may be a useful tool for strengthening team interaction and improving product quality; however, effective use of FIRO-B results in team development may require a structured sharing process.

## Introduction

Are teams really better? The prevailing thought is that teams foster cooperation, promote team/company spirit, and encourage creativity. These values are definitely worthwhile for the successful company, but many organizations "use teams" without understanding their dynamics and their potential benefits and detriments. Unfortunately, team-building is often prescribed as the workplace cure-all and as a way to increase productivity (Penson, 1996; Coutu, 2009).

Students also realize the need to work in teams; however, Pineda, Barger, and Lerner (2009) found that students have concerns regarding teamwork. These concerns may negatively impact student attitudes regarding teams in the workplace.

## Why Teams Fail

Sheard and Kakabadse (2002) posit that the difference between a group and a team can be defined by analyzing nine factors. A disparity in or lack of clarity in goals, roles, leadership, and communication can lead to problems in team formation. A perception of dissimilarity of values also leads to personality conflict with a team (Hobman, Bordia, & Gallois, 2003). In Coutu (2009), Hackman describes research that consistently describes teams that are not as successful as they could be. Communication and interpersonal relations seem to be key to the success of the team.

If there is discord within the ranks, the team's product will be inadequate and probably even less adequate than could be produced by several individual members working alone. In work comparing four studies on different types of teamwork, Antoni and Hertel (2009) found that all four studies describe self-regulation, at the team and individual level, as important for team effectiveness.

## **Conflict in Teams**

Some of the conflict experienced in the team setting occurs because some administrator thinks that bringing a group of diverse people together will create a diverse team; instead, it often creates conflicts and disharmony. Zetlin (1996) agrees that personality conflicts, lack of courtesy, negativity, and close-mindedness are all frequent barriers to the formation and operation of successful teams. Understanding and managing these problems can eventually result in a productive, creative team (O'Reilly & Barsade, 1997). O'Reilly, Williams, and Barsade (1999) studied the effects of various demographics on individual feedback regarding teams and found "the more different an individual is from the group, the less reported teamwork." (p. 1).

Weingart, Brett, Olekalns, and Smith (2007), in studying how personalities affect negotiation, concluded that cooperative group members are likely to have more success than individualistic group members because they are able to adjust their ideas to take in the goals of the team. Also, research by Schulz-Hardt, et al., (2006) supports this theory. Analysis of the research findings from a variety of studies led the researchers to conclude that dissent generally raised the quality and creativity of a group's decision making.

## **Leader Skills**

The successful leader knows how to manage these differences to grow the team and promote cohesion. For project managers, success may depend on the skills and attitude of the team, according to Pasek and Lewis (2004); and effective, respectful communication seems to be the key.

Fink (2006) touts personality testing as promoting understanding and cooperation, but also as enhancing leadership in both individual and team performance. According to Coutu (2009), Hackman's research shows that teams often do not agree on what the team is to do; the leader's job is to assist the team members in reaching agreement. To get this agreement, leaders must provide structure and focus on team processes.

## **Team Skills**

Adkins (2004) outlines five areas in which team members can improve their own team skills. Communication is the key to this improvement effort, beginning with simply deciding to be a team player and focusing on the success of the team. Hirschfeld, et al. (2006), report results from a study where team members were trained by the organization to understand and use effective teamwork techniques. These teams were more likely to perform better as a result of this training.

This study also reports that teamwork knowledge has an impact on the development of effective team members.

In outlining a philosophy of teamwork, Brown (1996) asserts that teams must have a clear purpose and function in the organization, they must be valued by the organization, and team behavior and team skills must be developed. Conflict is inevitable and desirable if creativity is to occur, but as Benjamin Franklin cautioned his team, "we must hang together, or assuredly we shall all hang separately" (p. 2). Realizing how people with different personalities approach problems differently also promotes trust and productivity, according to Weinstein (2008).

In a study using a reflective thinking technique (McInnis-Bowers, Chew, & Bowers, 2010), researchers found that such a technique helps teams work together where team members are different from each other. The reflective thinking assignment appeared to assist in completing work that is being redone and improved and may also increase student involvement. Research has also reported that team skills training improved team results in problem solving and communication; an interesting finding was that critical team members must have strong team skills as they played a major role in effective functioning for the team (Ellis, et al., 2005).

### **The FIRO-B (Fundamental Interpersonal Relations Orientation-Behavior)**

Because many of the problems encountered by groups are related to personal incompatibility, using personality-inventory scores to assign team membership seems logical. Many such instruments are available, but cost, intrusiveness, and need for counselor interpretation make many of them onerous. To avoid these complications, the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B; Schutz, 1992) was selected for use in this study to determine its usefulness in assigning members to writing teams. The basis of this idea is that people who understand how they behave with other people will have better interactions in a team setting.

The FIRO-B instrument is designed to measure personality characteristics on six dimensions—Expressed Affection, Wanted Affection, Expressed Inclusion, Wanted Inclusion, Expressed Control, and Wanted Control. A high “expressed” score indicates that the individual thinks he or she exhibits this behavior, while a high “wanted” score indicates that he or she wants others to act this way in relationship to him or her. Affection and Inclusion are somewhat similar, while Control is quite different. For example, someone who has great affection for others probably wants it in return; likewise, someone who likes to include everyone also wants to be included. On the other hand, someone who prefers to exercise control usually does not like to be controlled by others. As discussed by Underwood and Krafft (1973), “the better the fit, the more likely it is that the individuals will attain the goal of their relationship.” (p. 89).

Probably because of the simplicity of administration and the potential value of understanding personality, the FIRO-B has been used in such diverse areas as comparing social interaction differences of internal auditors (Siegel & Miller, 2010), assessing career satisfaction (Rooney, 2010), studying women who gossip in the workplace (Farley, Timme, & Hart, 2010), reviewing therapy in lesbian-abuser situations (Poorman & Seelau, 2001), studying adolescent development (Burton & Goggin, 1985), and appraising female power dyads (Ellyson, Dovidio, Corson, &

Vinicur, 1980). Also, the FIRO-B has been used to study other groups, such as: English midwives (Torpy, 1980), religious seminarians (Pino, 1980), and alcohol and drug abusers (Turner & Mayr, 1990). However, as Schultz (1992) states, “it was not constructed to be an instrument for general use. It was constructed to help compose groups whose members work well together, that is, are compatible.” (p. 916)

The FIRO-B uses six Guttman scales each with nine items and has a test-retest reliability average of .77 (Schutz, 1958). The documentation on the instrument as well as other research, however, suggests that the FIRO-B may not be the most accurate measure of personality. For example, there are concerns about its internal reliability (Furnham, 1996; Hurley, 1990). Gluck (1979), however, suggests that the FIRO-B does have construct validity and definitely measures what it purports to measure.

Studies of self-awareness (Fletcher & Baldry, 2000) suggest that knowing one's self is a skill in itself, and personality measure may thus be inaccurate simply because the subject does not understand himself or herself. For the purposes of this study, however, the FIRO-B may provide enough self-insight to promote cohesiveness and productivity in a team.

## **Background of the Problem**

Students work in teams in many of their courses; some of these team experiences are dysfunctional and negative. In Business Communication courses, teams are used for solving communication issues, and instructors must address the negative results that sometimes arise after a poor team experience.

A solution for an improved team experience may be in the team process, beginning when the teams are formed. Hopefully, an instructor could use the results of the FIRO-B to create teams of students who will interact favorably. Also, team members who completed the FIRO-B would be able to share knowledge about personal team behaviors; these members probably would understand their interactions.

## **Purpose of Study**

Developing teamwork skills is a major instructional goal for the Business Communication classes, and this project is designed to try to determine whether the FIRO-B can be an effective tool for (a) instructors when assigning members to work teams in classes (business classes, for the purposes of this study), (b) managers when assigning effective work teams in the workplace, and (c) students/workers in developing team skills.

## **Research Questions**

In attempting to determine whether the FIRO-B can be useful for assigning students to writing teams and for improving performance and cohesiveness in the business communication course, the following research questions were asked:

***Team Writing Performance.***

1. Is there a significant difference in team-writing performance among the five groups [(similar personality groups—affection, inclusion, control), mixed personality groups, and "randomly" assigned groups]?
2. Is there a significant difference in team-writing performance among the treatment groups (Treatment A, Treatment B and No Treatment)?

***Feeling and Cohesiveness.***

3. Is there a significant difference in group feeling and cohesiveness among the five groups [(similar personality groups—affection, inclusion, control), mixed personality groups, and "randomly" assigned groups]?
4. Is there a significant difference in group feeling and cohesiveness among the treatment groups (Treatment A, Treatment B, and No Treatment)?

## **Methodology**

The study included seven Business Communication sections taught by three instructors, with 177 students. After the second week of classes (once permanent class rosters had been established), the instructors of the experimental classes administered the FIRO-B to all students, and students were told their FIRO-B scores. The students in the "Randomly Assigned" (non-experimental or No Treatment) classes did not complete the FIRO-B.

### **Assignment of Team Members**

The FIRO-B score used to assign team members was the total *Expressed* and *Wanted* for each dimension—Affection, Inclusion, and Control. A student was selected for a particular team because he/she had a *high* score in a particular preference, even though it might not have been *the highest* score for him or her. For example, very few students exhibited a preference for Control, so those with the highest scores were considered to have high preferences. Once the similar teams (similar personality groups—affection, inclusion, control) were "filled," the mixed teams were then created.

Assigning similar types in the same team was more difficult than assigning a mixture of types, so team members were selected in this order: Similar types: Control team, then Affection team, and then Inclusion team; Mixed types: Control member, then Affection member, and then Inclusion member.

The determination of preference for Affection, Inclusion, or Control was imperfect, of course, partially because students self-selected the class and section. Also, an attempt was made to create a gender balance in teams.

A table of random numbers was used where appropriate to determine the mix of types in each team. Since the control groups (Randomly Assigned or No Treatment) were not assigned to each of the three instructors, differences in teaching style may have affected the group interaction and writing products. On the other hand, differences were minimized, in that, the instructors had taught Business Communication courses each semester at this AACSB accredited, mid-western university for more than 12 years prior to this study, and they met regularly to discuss the Business Communication curriculum. Therefore, students across sections were receiving the same course materials and content in similar settings.

***Administration of Treatment A.*** Instructor 1--Section 2 and Instructor 2—Section 3: Treatment A—Students were (a) assigned to teams based on FIRO-B scores, and (b) told that the *Introduction to the FIRO-B in Organizations* (Schell & Hammer, 1993) was available in the library.

***Administration of Treatment B.*** Instructor 1--Section 1 and Instructor 2—Section 4: Treatment B— Students were (a) assigned to teams based on FIRO-B scores, (b) asked to write an individual, three paragraph memo describing their own strengths (not their weaknesses), (c) asked to discuss their strengths with team members, and (d) asked to write a team memo describing how their interaction of strengths (not their weaknesses) would be productive. This memo was collected but not used for grading.

***Administration of No Treatment.*** Instructor 3—Sections 5, 6, and 7: No treatment was administered to the non-experiential “Randomly Assigned” (No Treatment) teams. Since these students did not complete the FIRO-B, no discussion of strengths was assigned.

In summary, students in Treatment A and B groups were assigned to teams based on the results of the FIRO-B. Treatment A students could read about their FIRO-B results in materials available in the library if they wished; Treatment B students were asked to write individual memos describing their strengths and to share these strengths with other team members. Then, the Treatment B groups wrote a memo describing how these strengths would be productive in the group.

At the end of the semester, student teams of all three instructors completed (in a controlled writing environment/testing area) an identical case requiring persuasive writing techniques. Beginning with a rubric designed and tested on a prior study, the three instructors revised the anchored rating scale; each instructor individually tested it by evaluating three sample papers and then made final revisions. Next, the instructors each rated all the team papers of the other two instructors. If the scores (on a 10-point scale) varied more than 2 points, the instructor rated the papers again.

Students also completed a team climate questionnaire (adapted from AUTHOR, 1995) identifying sex, age, major and then addressing 20 items on a scale of 1 (little) to 7 (much). The items applicable to this study are shown in Tables 2 and 3.

## Data Analysis and Findings

Of the 177 students participating in the study, 53 percent were male and 79 percent were traditional college students. The data were analyzed using SAS® programming to run the chi-square test, the Tukey honestly significant comparison test, and the analysis of variance test (ANOVA). Descriptive statistics were also produced (Cody & Smith, 1997).

### Team Composition Affects Writing Performance

The results showed that a significant difference in team-writing performance among the five groups similar personality groups (affection group, inclusion group, control group), mixed personality groups, and "randomly" assigned groups did exist. As shown in Table 1, the ANOVA procedure indicated significant differences among the mean scores on the quality of the written memo ( $F(4, 171) = 2.42, p < .01$ ). The Tukey honestly significant comparison, tested at the  $p < .01$  level, revealed that the randomly assigned groups scored significantly higher on the written document ( $M = 6.79, SD = 1.28$ ) than all other groups. The mixed personality groups scored significantly higher on the written document ( $M = 6.27, SD = 1.91$ ) than the similar personality groups. Testing at the  $p < .05$  level, the affection group scored significantly higher ( $M = 5.97, SD = 2.27$ ) than the control and inclusion groups.

The randomly assigned and mixed personality groups performed better on the writing project. The inclusion and control groups performed the worst on the writing project. This finding suggests that groups need some differences in types of interaction among group members to produce a quality document. For the inclusion and control groups, possibly the similar need of team members for control or inclusion caused issues that prevented the team from focusing on a quality document. Dissent was not productive as team members worried more about individual issues of control and inclusion. Members must focus on the success of the team as suggested by Adkins (2004).

The mixed personality teams may have performed better because of the knowledge of team members interaction behaviors where the use of the FIRO-B served as a type of training (Hirschfeld, et al., 2006; Brown, 1996).

Table 1: Means for Groups Regarding Quality of Written Memo

Groups N = 177	n	<i>M</i>	<i>SD</i>	Minimum	Maximum
Affection	17	5.97*	2.27	2.5	8.0
Control	17	4.15	2.84	1.0	8.0
Inclusion	13	4.85	1.25	3.0	6.0
Mixed	48	6.27**	1.91	2.0	8.5
Randomly Assigned	82	6.79**	1.28	4.0	9.0

Note. Scale: 1 = Very Poor; 10 = Excellent

\* $p < .05$ , \*\* $p < .01$

### Treatments Affect Writing Performance

A significant difference in team-writing performance among the treatment groups (Treatment A, Treatment B and No Treatment) was evidenced with the ANOVA procedure ( $F(2, 169) = 6.91, p < .01$ ). The Tukey comparison at the  $p < .05$  level showed that the students in the No Treatment groups ( $M = 6.79, SD = 1.28$ ) scored significantly higher on the written document than the Treatment A ( $M = 5.92, SD = 2.71$ ) and Treatment B ( $M = 5.63, SD = 1.48$ ) groups. The students assigned to groups that did not use the FIRO-B scored higher on the written document than the treatment groups which did use the results of the FIRO-B for group interaction. This process took time; and the time required may have impacted the quality of the treatment groups' written documents. Students may have spent more time on the sharing of the FIRO-B results, and then did not have enough time for the actual writing process. These findings conflict with results in previous studies that show improved team functioning after some discussion of team knowledge or reflective thinking (Hirschfeld, et al., 2006; Ellis, et al., 2005; McInnis-Bowers, Chew, & Bowers, 2010).

The mean responses on the team climate questionnaire for groups are shown in Table 2. Significant differences in group feeling and cohesiveness among the five groups did exist on Items 2 ( $F(4, 174) = 2.69, p < .05$ ), 5 ( $F(4, 170) = 3.10, p < .05$ ), and 13 ( $F(4, 172) = 3.94, p < .01$ ). The Tukey comparison ( $p < .05$ ) indicated significant differences between the mixed ( $M = 6.17, SD = 0.86$ ) and randomly assigned ( $M = 6.61, SD = 0.83$ ) groups on Item 2, the control ( $M = 1.63, SD = 1.09$ ) and mixed ( $M = 3.08, SD = 1.57$ ) groups on Item 5, and the mixed ( $M = 4.29, SD = 1.66$ ) and randomly assigned ( $M = 5.32, SD = 1.62$ ) groups on Item 13. The frequency of responses to the team climate questionnaire for Item 16 by the different personality groups is shown in Table 3. Sixty-three percent of the respondents chose Item d as the "statement which

best describes your group”; however, the *Chi-square* test for Item 16 revealed no significant differences between the groups and their responses to Item 16.

The randomly assigned groups felt more comfortable in expressing their ideas than the mixed personality groups. The mixed personality groups experienced more procedural conflict than the control groups, and the randomly assigned groups developed more new friendships beyond the classroom than the mixed personality groups. Mixing group membership among the three personality types of affection, control, and inclusion appears to introduce procedural conflict; especially when compared to groups with control personality types which consisted of students who want to be in control and who do not want to be controlled by others. The groups consisting only of control personality types had less procedural conflict.

Table 4 shows the mean responses for the team climate questionnaire and the treatment groups. The ANOVA procedure revealed significant differences in group feeling and cohesiveness among the treatment groups (Treatment A, Treatment B, and No Treatment) on Items 1 ( $F(2, 173) = 3.83, p < .05$ ), 10 ( $F(2, 174) = 4.19, p < .05$ ), and 13 ( $F(2, 174) = 5.92, p < .01$ ). The Tukey comparison ( $p < .05$ ) revealed significant differences between the Treatment B ( $M = 6.23, SD = 0.97$ ) and the No Treatment ( $M = 6.67, SD = 0.67$ ) groups on Item 1. Significant differences were also revealed on Item 10 between the Treatment B ( $M = 5.06, SD = 1.53$ ) and No Treatment ( $M = 5.78, SD = 1.47$ ) groups. Item 13 mean responses show significant differences among all three groups, Treatment A ( $M = 4.56, SD = 1.68$ ), Treatment B ( $M = 4.39, SD = 1.59$ ), and No Treatment ( $M = 5.32, SD = 1.62$ ) at the  $p < .05$  level of significance. Table 5 shows the frequency of responses to the team climate questionnaire for Item 16 by the treatment groups. Item d was chosen by 63 percent of the respondents. The chi-square test ( $X^2(10, N = 177) = 23.59, p < .01$ ) indicated significant differences do exist regarding the treatment groups and Item 16 of the team climate questionnaire. Sixty-three percent of the students in Treatment

Table 2: Means for Team Climate Questionnaire and Similar Personality Groups, Mixed Personality Groups, and Randomly Assigned Groups

Item Question	Affection n = 17		Control n = 17		Inclusion n = 13		Mixed n = 48		Randomly Assigned n = 82	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. Did you feel <b>Comfortable</b> to express your ideas?	6.76	0.44	6.41	0.94	6.38	1.12	6.17*	0.86	6.61*	0.83
5. How much <b>procedural conflict</b> did your team experience?	2.94	1.78	1.63*	1.09	2.83	1.75	3.08*	1.57	2.43	1.63
13. Have team members appeared to have developed <b>new friendships/relationships</b> that go beyond the classroom?	4.71	1.40	4.24	1.75	5.23	1.54	4.29**	1.66	5.32**	1.62

Note. Scale: 1 = Little; 7 = Much. The randomly assigned teams did not complete the FIRO-B. Table 2 only contains selected items from the Team Climate Questionnaire.

\* $p < .05$ , \*\* $p < .01$

Table 3: Frequency of Responses to Team Climate Questionnaire Item 16: which of these statements BEST describes your group?

Perceived Team Climate	Affection n = 17	Control n = 17	Inclusion n = 13	Mixed n = 48	Randomly Assigned n = 82	Total N = 177
a. One or two do all the work—usually effectively	2	3	1	4	4	14
b. One or two do all the work—not very effectively	0	0	0	2	0	2
c. There seems to be two subgroups most days	0	0	1	2	5	8
d. Everybody seems to share the work fairly evenly and we accomplish a great deal	11	12	9	23	57	112
e. Everybody seems to share the work fairly evenly, but it takes a while to get everyone to agree	4	2	2	17	10	35
f. One person disagrees with everyone else much of the time	0	0	0	0	6	6
Totals	17	17	13	48	82	177

Note. The values represent the number of respondents for each statement and each group.

Table 4: Means for Team Climate Questionnaire and Treatment Groups (Treatment A, Treatment B, and No Treatment)

Item	Question	Treatment A n = 46		Treatment B n = 49		No Treatment n = 82	
		M	SD	M	SD	M	SD
1.	Did you feel as if you were a <b>full member</b> of the group?	6.52	0.81	6.23*	0.97	6.67*	0.67
10.	How easy does your team find it to make <b>decisions</b> ?	5.63	1.10	5.06*	1.53	5.78*	1.47
13.	Have team members appeared to have developed <b>new friendships/relationships</b> that go beyond the classroom?	4.59**	1.68	4.39**	1.59	5.32**	1.62

Note. Scale: 1 = Little; 7 = Much. The randomly assigned teams did not complete the FIRO-B. Table 4 only contains selected items from the Team Climate Questionnaire.

\* $p < .05$ , \*\* $p < .01$

Table 5: Frequency of Treatment Group Responses to Questionnaire Item 16: which of these statements BEST describes your group?

Perceived Team Climate	Treatment A n = 46	Treatment B n = 49	No Treatment n = 82	Total N = 177
a. One or two do all the work, usually effectively	6	4	4	14
b. One or two do all the work, not very effectively	0	2	0	2
c. There seems to be two subgroups most days	2	1	5	8
d. Everybody seems to share the work fairly evenly and we accomplish a great deal	29**	26**	57**	112**
e. Everybody seems to share the work fairly evenly, but it takes a while to get everyone to agree	9	16	10	35
f. One person disagrees with everyone else much of the time	0	0	6	6
Totals	46	49	82	177

Note: The values represent the number of respondents for each statement and each group.

\*\* $p < .01$

Fifty three percent of students in Treatment B, and 70 percent of students in the No Treatment groups chose Item d to best describe their groups.

The No Treatment group members felt as if they were a full member of the group more than the Treatment B groups. The No Treatment group members felt it was easier to make decisions than the Treatment B groups, and the No Treatment groups developed more new friendships beyond the classroom than the other Treatment groups. Interestingly, students in the Treatment A groups developed more new friendships beyond the classroom than the Treatment B students. Possibly, a “self-fulfilling prophecy” was impacting the Treatment B groups’ interactions. Weaknesses may also have been discussed, even though students were asked not to discuss weaknesses, which then led to group members’ expectations of certain dysfunctional behaviors regarding an individual’s skills. When describing their treatment groups, a significant number of students described their group as “everybody seems to share the work fairly evenly, and we accomplish a great deal.” However, the No Treatment groups chose this response more often than the Treatment A or B groups.

This result appears to have some support in the work of Hirschfeld, et al. (2006) in that possibly the course instructor (the leader) needs to communicate to the groups what behaviors will result in an effective team.

## **Conclusions and Recommendations**

Overall, the FIRO-B did not appear to be useful in assigning effective work groups in the Business Communication classroom or in developing team skills. In fact, the use of the FIRO-B appears to have a detrimental effect on group functioning in the classroom. In spite of Schutz’s (1992) comments, the FIRO-B did not work well in forming compatible groups in this case. Using the FIRO-B in the workplace under similar circumstances may be questionable as well. However, an argument can be made that with improved use of the FIRO-B, groups may make improvements in the functioning of the group members.

In Business Communication courses where writing groups are used, students should be assigned to mixed personality or randomly assigned groups. Business Communication instructors should avoid group membership where students are similar in personality and group interaction styles. This mixed or random team assignment appears to result in a higher quality product.

If an instructor wishes to use the FIRO-B, that instructor will need to use a facilitator, to implement training, or to provide a structure to ensure effective sharing of group members’ FIRO-B results. In this way, the strengths each member brings to the group can be effectively used. This recommendation is in line with the Hirschfeld, et al. (2006) suggestion that the leader (the instructor) needs to develop a philosophy of effective teamwork. A disadvantage to this recommendation is that instructors may not have the time in the course to add such an intervention.

The Treatment A groups were not required to self-reflect on their FIRO-B results; therefore, no sharing may have occurred. An attempt was made in this study to add structure to the Treatment

B groups' sharing of the FIRO-B results; however, this attempt may have had a negative effect on the teams' ability to function.

Also, groups using the FIRO-B must have enough time to explore the results of the FIRO-B; Business Communication instructors must give groups enough time to use the FIRO-B results appropriately and to write the team exercises. Instructors should require that the FIRO-B results be shared within teams as in Treatment B and the use of the FIRO-B results should be used in more than one assignment. The researchers also recommend that the FIRO-B should be completed earlier in the course to use results throughout the semester in various assignments. When assigning members to groups, Business Communication instructors should consider the characteristics of the decisions to be made or the task assigned to the groups. To give groups a sense of accomplishment, to promote equal sharing of the work, and to create high-quality writing projects, instructors must structure any intervention such as the FIRO-B into the groups' processes. Without structured interventions throughout the semester, groups working on writing projects appear to do better with no interference.

In summary, the FIRO-B can be a useful tool if used to improve students' self-awareness of behaviors in groups. The instrument could be used to make students aware of strengths and weaknesses in group interactions, but also to make use of strengths in the group and to improve on weaknesses. Business Communication instructors must consider the amount of time and expense required to use the FIRO-B in the Business Communication classroom and decide whether it is a good use of the already limited time available in the course. Many instructors may decide to spare the costs in time and money of the FIRO-B and develop another form of a structured sharing experience. The attempt to structure the Treatment B students' sharing and use of the FIRO-B results may have resulted in negative perceptions among the team members which resulted in a less rewarding group experience. An intervention is needed when using the FIRO-B to ensure appropriate and positive sharing of results and development of improvement strategies.

Further research is required, especially in developing a more structured intervention and testing the results of using this intervention in the Business Communication course. The findings suggested that the mixed personality groups had more procedural conflict, yet these groups still produced a quality product. Further research is required regarding the impact of this procedural conflict on team dynamics. Did the procedural conflict introduce an element that may reduce groupthink? Or, did the conflict produce an ongoing tension that had a negative impact on the team interaction?

Another area for future research is the self-fulfilling prophecy issue; did the possibility of sharing weaknesses in the Treatment B groups cause group members to "expect" those negative behaviors of their fellow group members? This study should also be replicated in a business setting to test the usefulness of the FIRO-B in improving employee group dynamics and the quality of written documents.

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