Let's get Personal: The Influence of Personality Type Assessments on Team Communication and Structure

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By

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Purpose and Overview

Working in small groups is a common occurrence in the educational and career sectors. Not only is group work reported by individuals as being important, but it is also stated to be a positive experience. Working together in a group helps others become accommodated to working together and acquiring different viewpoints. Beyond that it also prepares individuals for ethical communication, conflict management, problem solving, leadership, and critical thinking and analysis skills (Kohn & Smith, 2010).

One of the main focuses of this study is on team effectiveness looking to recognize if personality assessments are needed for a group to effectively work together. This will help organizations understand the important aspect of how much time and expenses should be spent on personality assessments before having groups start on projects together (Bradley & Herbert, 1997).

The study continued to explore the relationship of learning about personality types and discussing the personalities in a small group. Thus, the success of team effectiveness is tested through a self-administered survey to gage if the use of Truity's TypeFinder® Personality Test (TFPT) assessment can help facilitate team effectiveness.

The balance of understanding and discussing personality types is a potential advantage to the effectiveness of a team's work ethic. Working in a team with members of different personality types that know how to work well with other personality types will achieve team effectiveness more efficiently than a team with a lack of understanding on their own and others' personality types. It is predicted that the TFPT assessment on personality types will have a strong, positive impact on overall team performance and team effectiveness. In addition, is can

also be predicted that the team that takes the quiz and discusses their results will rate highest in team effectiveness.

Literature Review

Team Relationship and Leadership

A study done by Bradley & Herbert (1997) from the *Journal of Management Development* ensured that a leader is essential to the building of a team. For example, an assertive leader should be trained in group dynamic techniques so that the leader can manage the diverse personalities of individuals present in a team. It can be predicted that a team leader with effective training on teams and leadership will be better equipped to serve as a leader in comparison to a leader with little or no training (Bradley & Herbert, 1997).

Team performance in relation to leadership style is not a new concept. A study done by Burke (2018) discussed leadership as a complex concept that has been extensively researched throughout history and has been connected to a range of team and organizational performance factors. The data suggests that team leadership functions such as team problem solving, supporting social climate, structure and planning, and sense making are among the most prevalent. Results of this study also indicated that the degree to which leadership is distributed throughout the team, as well as the formality of leadership, varies across action and transition phases of the team's task cycle. Despite the growing interest in extreme teams, there is currently a lack of understanding concerning leadership within such teams, as the literature has predominantly focused on team leadership within the context of traditional organizations.

Other studies focused on leadership processes within a team and described how team leadership can arise from four distinct sources inside and outside of a team setting. Researchers of the study done by Morgeson in 2010 have explored the role of leaders in promoting team

learning and adaptation, how team leaders manage events that occur in the team context, the role of team leaders in managing team boundaries, how traditional leadership theories such as transformational leadership theory operate in a team context, and how leadership roles are shared in teams. Given the centrality of these needs for team performance, team leadership can thus be viewed as oriented around team need satisfaction (with the ultimate aim of fostering team effectiveness) (Morgeson, 2010).

In another study on team leadership by Graca, & Passos in 2015, their research data suggests that the two types of teams studied used different performance criteria with teams from non-profit contexts lacking well-defined performance criteria. The results also showed that transition to leadership functions are more frequently mentioned by information technology companies than by multidisciplinary team leaders. Moreover, interpersonal leadership functions emerged as independent functions that may occur in both the transition and action phases (Graca & Passos, 2015).

According to leadership study done by Chiu, Owens & Tesluk in 2016, "...shared leadership should facilitate higher performance when a team has highly capable members because it can more effectively utilize a stronger pool of talent" (Chiu, et al., 2016, p. 6). This study concludes that when group members of a team work efficiently based upon their skill sets (this can also include personality types), they are able to put together their work ethics to generate better task performance, therefore amplifying the performance of the group. In the same study, it is stated that if multiple members engage in leader-follower interactions and continue to negotiate their roles, the social construction of the leadership structure will evolve to shared leadership roles in which multiple individuals of the group will be recognized as leaders within

the group (Chiu, Owens & Tesluk, 2016). In order for groups to work effectively, uniformity in their work ethics is important for success in their task performance.

Uniformity is important in the effectiveness of a group. When members of a group are on the same page, the performance of a team is higher. The greater pressure toward uniformity, the greater group-composition and influence of the group on an individual. The acts of all individual group members commit to the group as a whole. Team effectiveness is an important function to group and group dynamics because it also can affect the performance of a group, or team, as a collective whole.

Team Performance

Hughes & Jones (2011) believed that teams are defined by multiple things: a shared collective identity, common goals, interdependent based on tasks and outcomes, distinct roles within the group, and a role within a larger organizational context. The five characteristics can be seen as dimensions that all groups naturally vary on (Hughes & Jones, 2011).

When it comes to performance and success, successful teams were once thought to need a formal leader. Although formal leaders are proven to be successful, there is an even higher chance of success when every member of the team takes part in leadership and management. Every member of the team should perform as a leader from time to time. However, being a leader requires strong social skills. Social skills of each team member are an important piece in determining how members will fulfill the needs of the team in leadership and overall completion of tasks. Hughes & Jones stress repeatedly that the team's performance, whether successful or not, needs to be evaluated at the end of the project. After they evaluate the team, they require efficient feedback. There is no ability to learn new skills without understanding the existing issues. Some tools to help teams receive feedback are the CATME (Comprehensive Assessment

of Team Member Effectiveness) test and the VALUE (Valid Assessment of Learning in

Undergraduate Education) rubric (Hughes & Jones, 2011).

Individual team members can use outside tools such as the VALUE rubric to assist the

team but members must also be aware of internal tools that each member holds. Such tools

include cognitive thinking and knowledge structures. When team members work together

individuals must use cognitive thinking skills to choose alternative behaviors that are most

appropriate for each team situation. The team members are left to judge which action they judge

to be best suited for the situation. Research finds that knowledge structures are directly related to

individual performance in a team.

Along with the use of knowledge structures, the use of individual skills are also important

in a team setting. Each individual in a team should have a specific skill to contribute. Some skills

individuals hold are essential for the smooth functioning ability of the group. Prosocial behavior

tendencies encourage coexistence and wellbeing in work teams. Cuadrado & Tabernero (2015)

studied team performance and effectiveness through means of prosocial behaviors. The

researchers define prosocial behavior as an extensive category of intentional behavior intended to

benefit others. Through the study, prosocial behavior is assumed to encourage team positivity in

social and environmental contexts (Cuadrado & Tabernero, 2015). The data suggested that good

team function include: (a) the promotion of prosocial behaviors and (b) moderation of

association between individuals in groups and their performance. Positives affect and enhance

prosocial behavior. Psychology researchers Steven Harper and Charles White (2013) conducted a

study that analyzed the use of cross-functional work teams to bring together employees of

diverse backgrounds. The data was able to conclude that work teams need at least one member

with a minimum level of skill in the emotional perception dimension and at least one member in

the emotional management dimension (Harper & White, 2013). Team effectiveness and team performance of a group can also be determined by the diversity of group members and how the group dynamic can be changed as so.

Diversity of Personality Types

Diversity strongly effects this study as teams are composed of many different people, all with different backgrounds in experience, personalities, and demographics. Teams and diversity will affect most people in both an educational setting, and the workplace. The high level of competition in the business and academic realm has led to a need for increased productivity. To increase productivity, companies and academic institutions have found the formation of teams to be a worthy tool in enhancing productivity and idea sharing. This surge in teams has led to a need for tolerance among individuals. To help aid in tolerance, institutions have presented Myers-Briggs theory as a solution. Pittenger discussed that the MBTI test contains 16 personality types that are all considered unique with a specific cluster of cognitive and affective preferences (Pittenger, 1993). This test is frequently used in academic and career settings. The theory explores individuals' leadership and behavior in specific circumstances. Researchers from an article from the Journal of Management of Engineering by Varvel & Adams & Pridie & Ruiz (2004) concluded that one of the greatest benefits to the Myers-Briggs test is team understanding and tolerance, which contributes to greater team effectiveness. The researchers findings from the study concluded that training done on personality types of team members did help improve overall team effectiveness. Though the study did not find a significant link between MBTI team member personality results and team effectiveness.

An article from the *ABNF Journal* from Waite and McKinney (2018) stated that the most common personality types out of all 16 types, based on data before and after taking the MBTI

training, is the ENFP pretest, and ESTP posttest. Essentially, the MBTI training has the ability to change and affect the personalities of the participants based on their attitude. Waite & McKinney examined the benefits of giving the MBTI training to undergraduate students to help them learn insights on their leadership preferences. The students will also gain the understanding that each personality type has its own benefits and drawbacks. Furthermore, Waite & McKinney suggested that one aspect that could be a benefit or a drawback is the team's environment. Personalities are often heavily influenced by environment which can be shaped by the team's relationships (Waite & McKinney, 2018).

As personalities are heavily impacted by their environment, the environment of the group can be heavily influenced by the physical diversity of the team. Curşeu & Pluut (2013) also stressed the importance of gender and nationality diversity among teams. A strength of group diversity is that it can be changed. It is especially important that teachers influence groups to not only have diversity among students, but also that they work on their team skills regularly. Teachers must pay close attention to how teams are composed if they want to ensure these diversity skills. An article from the *Journal of Applied Communication Research* by Bantz (1993) stressed that sharing small talk and common courtesies with others who are diverse can be easy, but working together as a team over a long period of time will start to show a display of power imbalance, language and cultural differences, uncertainty, and so much more if the group is uneducated on working together with diversity. Herbert discussed to create an effective team, members of the team must work together to contribute specific skills to the team (Herbert, 1997). Three characteristics have been found to be heavily related to an effective team, effective leadership, intra-team communication, and group cohesion. Having a team that has ineffective leadership and a poor group dynamic with little communication can lead to low team

productivity and moral (Herbert 1997). Overall, a successful diverse group can show understanding and flexibility among its members. Multiple studies have proven that change is both essential, and possible.

Curşeu & Pluut (2013) from the journal titled *Studies in Higher Education*, discussed that a strength of group diversity is that it has the ability to be changed. It is especially important that teachers influence groups to not only have diversity among students, but also that they work on their team skills regularly. Teachers must pay close attention to how teams are composed if they want to ensure these diversity skills. Although this study is going to focus on diversity in personalities, Curşeu & Pluut also stressed the importance of gender and nationality diversity among teams. There are major differences in genders and teamwork (Curşeu & Pluut, 2013).

In psychological and behavioral research, women are often underrepresented as a diverse group. Patricia Bresky (1998) analyzed the communication patterns of women in a study of 75 undergraduate students (56 females; 19 males) and concluded that women are more likely to communicate with others in less-assertive and non-self-disclosing communication patterns in randomized group settings. Both men and women perceive non-assertive communication as less effective, women, thus greater self-acceptance of genders and greater acceptance of the other. Bresky defines the idea of being "less assertive" through the women participants' tendencies to be "tentative" when speaking to others in the groups (mixed or same sex). In this study, through qualitative observations, Bresky's findings show that women in mixed gender groups disclosed less than when put into same sex groups. With the data collected, we can assume that women are more likely to be less assertive and feel less of expectations to self-disclose when interacting in a group where the members are not only female. Findings show that women are more likely to be less assertive when put into randomized groups and expected to participate in conversational

exercises. Because of the different ranges of diversity that can often appear in groups, a sudden shift in the group's dynamic can ultimately cause conflict among the group members (Bresky, 1998).

Conflict

Conflict can arise for the upcoming study in many ways. First, conflict can be looked at as something many students come across, especially when they are not aware of their own personality types, and what comes with having certain personalities.

Looking back to the Waite & McKinney study, people with the ENFP personality type typically have unresolved issues and stress from becoming overwhelmed. This is highly interesting when thinking in terms of college students and the amount of stress they typically endure. Other findings from the Waite study published by the *ABNF Journal* has unique information on undergraduate students personalities and health (Waite & McKinney, 2018).

Although there are not many findings on personality types or college students and teams, there are tests and trainings that have already been created to focus on personality types as well as team skills. A study done for the *New Directions for Institutional Research*, by Hughes & Jones (2011), discussed an existing test that examines teamwork by Stevens and Campion (1994, 1999) that looked at five components. The five components include conflict resolution, collaborative problem solving, communication, goal setting and managing performance, and planning and task coordinating. However, it is important to note that this test was originally designed for the work force as a limited 1 time occurrence, for a specific group. It is not designed to help students of any age learn team working skills.

Conflict can be improved or eradicated in teams with education and application. Tekleab, Quigley, & Tesluk (2009) stated that the ability of team members being able to successfully

handle conflict has a positive effect on team cohesion. The study also found that team cohesion can be positively related to team satisfaction. A recent study done by Clinebell, & Stecher, confirmed that the ability for teams to work well together and have positive team cohesion directly relates to the individual's outlook on working in teams (Clinebell, & Stecher, 2003). If team members' have a positive perception of teamwork, the team has a higher chance of an increased team effectiveness rate. Findings showed that students in teams often complain about team conflicts and coordination problems. Working in teams with low conflict management can result in a negative experience for the team members which can create a negative perception on teamwork.

It can be concluded from the literature review that there is substantial research that the topic of team effectiveness and personality types are interrelated. It can also be concluded that there is limited research to how pivotal examining personality type is to the team effectiveness of a group just that there is linked importance. There is a great deal of related information to help guide the study and the new findings will contribute substantial information to the research in both education and professional settings.

Research Questions & Hypothesis

With all factors considered, and the existing but limited research in the field, this research study will shed some light on team effectiveness through the use of knowing and understanding, or not knowing personality types, as well as discussing or not discussing the personality types discovered through the TFPT assessments. The first research question is; does the understanding of one's own personality type positively benefit the effectiveness of a group, or does it have no effect at all? The hypothesis for this question are as follows;

1.When teams assess individual personalities, communication is more effective.

2.When teams assess individual personalities, team outcomes is more effective.

Null: Communication and team outcomes are unaffected by assessing individual personality types.

The second research is; does the verbalization and understanding of everyone's personality types support the group in decision making and overall team effectiveness? The hypotheses of this research question is as follows;

1. When teams assess and discuss individual personalities together, communication and team outcomes are more effective.

Null: Team outcomes and communication are unaffected by discussing personality types.

This will help organizations understand if understanding personality types makes a difference in team effectiveness as well as give organizations insight into just how much time or communication efforts are required to aid in team effectiveness. The overall purpose of this study is designed to look at the inner workings of teams as a whole.

Student teams in an undergraduate class will benefit from understanding their own personality type. The teams who receive the TFPT assessment and discuss their diverse personalities will have stronger communication and effective teamwork than the team who does not receive any testing as well as those who do but do not discuss their personalities with one another.

Methods

After analyzing various studies and research, the direct focus of the study is to determine the effectiveness of Truity's TypeFinder® Personality Test (TFPT) in relation to team success. This study is an analysis of differential as the closing questionnaire that was given determined the small groups' effectiveness. Participants of this study are undergraduate students from a

private institution of higher education who ranged in age from 18-22 years old. All twenty students that participated in this study are currently in their required freshman seminar class. The students were divided into three random groups through simply counting down a list to eliminate any bias, and to have the most even and random teams.

The students will be split into three groups. Group one will have seven students, this group will not take the TFPT assessment. Group two also has seven students; this group will take the assessment but will not discuss their determined personality types. The last group also has seven students and will take the assessment and discuss their results for five minutes before starting the intended activity. After the thirty minute project is complete, all groups will conduct a self-administered questionnaire on how they feel their group performs as a collective team. The instructor of the course will also give a numerical score to each team's completed activity, to provide objective quantitative data on how the teams did and can then be compared with the personal opinions of each student on team effectiveness. This study is testing the direction of the relationship between personality assessments and group communication, therefore it will be a one-tailed research study. This study will determine whether there is a relationship between the variables in the single direction of personality type assessment and team communication and overall effectiveness. Lastly, all participants will take a survey after completing the group activity to provide qualitative data by answering open ended and opinion based questions. Between the rubric and rating question in the survey, along with observations and survey, the study will collect both quantitative and qualitative data.

The specified study is field-dependent as the small groups are dependent on the location and environment of the classroom. The time period of this study is cross-sectional as the study will examine different variables at the same given time. The study will analyze the groups

through testing instruments that are given after the short-term small group projects. The unit of analysis of the exploratory study will consist of three small groups with six to seven students per group, of twenty undergraduate students from a small private college in the midwest.

The demographics of this study can be broken down into categories. First, the sample will consist of students from the specified college. The participants in the study are a convenient sample, as it would be the most time-efficient to both the researchers and participants. The participants will also consist of first-year university students because the study will be done in a required General Education course. Students in General Education courses consist of a variety of majors, ages, genders, and other factors that will also result in the diversity of personality types in contrast to a major-specific course where students have similar interests and personality types, because every first year student is required to take the course used for the study.

General education courses help the study maintain a random selection, with convenience as a factor. This study is conducted on the use of Truity's TypeFinder® Personality Test that has not been clearly studied by other researchers yet. Due to this and the small localized participants of the study, the results can not be compared nationwide. The study is to be considered exploratory. The participants of this study will be in three small groups being studied with a total of twenty student participants.

After conducting this research, we intend to find that undergraduate students who receive the TFPT assessment on personality types while also discussing their personalities together will have a significant difference in their overall team communication and effectiveness compared to the other two groups who either did not receive the TFPT assessment nor discuss their personality types. The researchers acknowledge its results limitations due to the study being exploratory. This study will help provide a framework for further research.

Results

The results of the study ultimately support the null hypothesis that the use of personality assessments paired with a discussion have no effect on team communication and structure. This means that there is no significant difference between taking the Truity's TypeFinder® Personality Test and a team's success in working together as a collective small group. The first statistical analysis of the data is a chi square test of significance, which determines if the quantitative data shows significant difference between expected and observed data. One key question was chosen to analyze using a chi square test of significance. The data came back as not statistically significant. Figure one depicts an example of the responses of participants, accompanied by the chi square test data results. The chi square test determined the data is not significant with a result of $p < .05$. The P value of the data is 0.996308 while the chi statistic being 1.2327, shown in figure 1.

Fig. 1
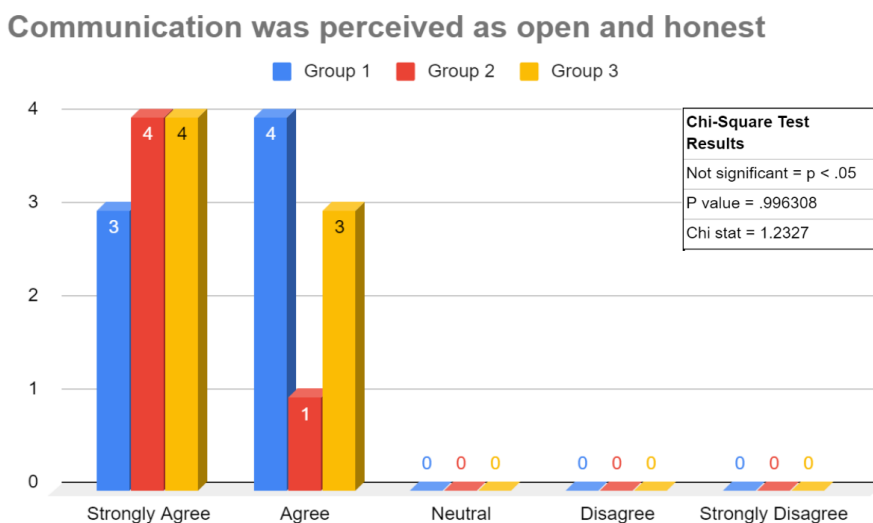
Insignificant statistical data supports the null hypothesis that the use of a personality type assessment as well as the addition of discussion does not affect team communication and effectiveness.

Another instrument of quantitative data collection in the study is a rubric grading the activity for each team. Figure 2 is a visual representation of the rubric data.

**Fig. 2**

Results of activity rubric by group
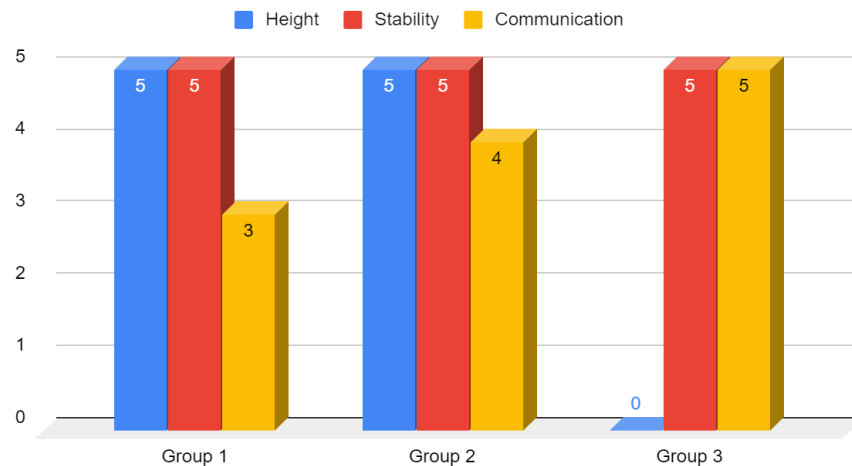
The figure shows the results of the activity between each of the three teams. The height and stability scores are the first two columns for each team, with an outlier from group three, due to the activity having a technical error. The unique data from the rubrics is the communication scores of the teams. For a statistical analysis of the data, a one tailed T-Test was done between group 2 (Independent Variable 1) compared to the control group 1, and another T-Test between group 3 (Independent variable 2) to the control group 1. The first T-Test between group 1 and 2 showed a t-value of -0.44721 and a p-value of .338934 resulting in the data not being significant at $p < .05$. The T-Test between group 1 and 3 showed a t-value of 0.55709 and a p-value of .303584 resulting in the data not being significant at $p < .05$.

In future research, a larger sample size will be necessary to find significance in the data. However, the qualitative data in the study found that there could be a difference of communication and coordination between group 3 (IV 2) and the other two groups in the study.

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Fig. 3 is a visual display of the data from an open response question looking at what major problem arose in each group during the activity according to each participant.

Fig. 3

Perceived problems according to participants

Legend: Group 1 (Control) — Group 2 (IV 1) — Group 3 (IV 2)
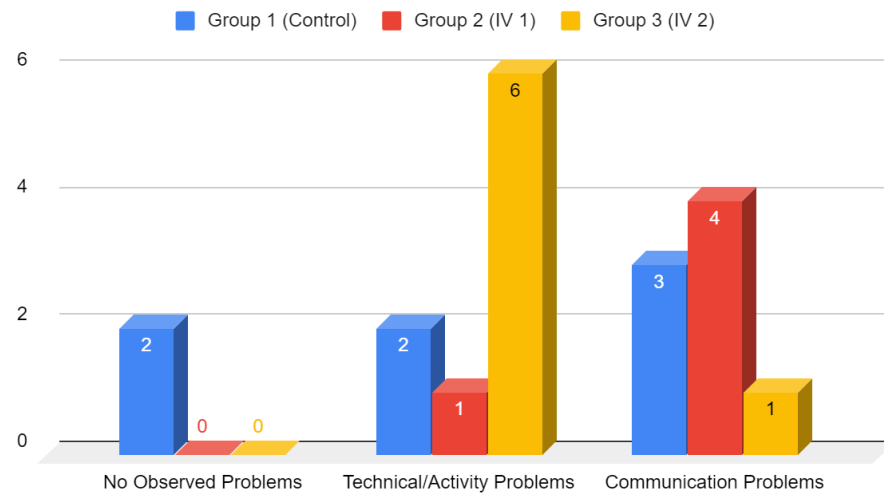
Although the data is insignificant statistically, it is clear from the visual representation that Group 3 has stronger communication skills when compared to the other two groups. Group 1 and Group 2 showed a majority of problems with communication, whereas group 3 showed a majority of technical activity errors (i.e. the tower could have been taller or stronger). Fig. 3 is one of several examples of qualitative data supporting the alternative hypothesis that personality assessments and discussions effect team communication and structure, however it is still insignificant data due to the exploratory nature of the study.

Discussion

The applied theory to be discussed is Functional theory. This theory was chosen due to its great praise in relation to small groups. As Orlitzky states, "According to some scholars (e.g., Cragan & Wright, 1990, 1993; Pavitt, 1994), one of the more promising theoretical frameworks that accounts for the relationship between communication and group decision-making

effectiveness is the functional theory of group decision making" (Orlitzky & Hirokawa, 2001, p. 2). Functional theory showcases the need for quality idea creation, collaboration, selection, and implementation (Wittenbaum, et al., 2004, p. 19). Throughout the activity, Group 3 (IV 2) shined in reference to voicing their opinions as a team. Group 1 and 2 consistently were unable to collaborate. These qualities were demonstrated through observed data as well as survey data. The research team observed similar instances for Groups 1 and 2.

Orlitzky stated, "The core notion of the functional theory is that effective group decision making is contingent on interactions' contributing to the satisfaction of critical task requirements" (Orlitzky & Hirokawa, 2001, p. 4). This displays the need for open communication as well as actions. These features were not seen in all the groups. The research team concluded that the team often looked at the other groups for ideas, while members reported staying silent themselves. When communication was present many ideas were thrown away, showcasing a group at conflict with next steps. Wittenbaum stated, "The importance of invoking matters of concern for them to be explicitly discussed and thus collectively negotiated" (Wittenbaum, et al., 2004, p. 19). This displays the consequences Groups 1 and 2 obtained through consistently remaining quiet and not voicing ideas. When a group stays quiet and does not voice and collaborate ideas it is seen in the group's lack of work. When a group produces too many ideas and showcases excessive judgement it is also seen in the group's lack of work (Wittenbaum, et al., 2004 p. 19). The ideology of the level of ideas being produced can again be seen as a theme through the survey.

Group 3 took the personality test assessment and discussed their results. Groups being able to produce ideas together is a major part of creating a project. Wittenbaum emphasized that "group ideation would be enhanced if groups followed four simple rules: deferring judgment,

focusing on generating a high quantity of ideas, saying all ideas that come to mind, and building on the ideas of others" (Wittenbaum, et al., 2004 p. 19). This is put together well by Li who states," Generate as many of the possible and realistic choices as it can from which a best decision can be made" (Li, 2007, p. 595).

Throughout the project the researchers observed Group 3 collaborating on ideas together and deferring judgment which resulted in generating a clear goal. This was also seen as a theme in the survey results. Group 3 consistently stated that their group continued to collaborate on ideas until they found an idea that fit well for a majority of the group.

Comparable, Group 1 and 2 self-reported instances of having too many leaders as well as too many ideas. Two individuals in group 2 reported in the survey stated that due to the conflict they stayed silent on their ideas. Wittenbaum insisted that, "Matters of concern may be voiced by a single person, their negotiation implies a collective activity. This negotiation is necessary for selecting and stabilizing those matters of concern that are collectively considered to be significant and consequential for the organization" (Wittenbaum, et al., 2004 p. 19). The fact that individuals stayed silent on ideas that were produced displays the ideology that even when ideas and concerns were produced a group consensus was not made. Due to this, individuals in group one and two felt they were unable to implement a conscience strategy.

This was seen through the survey where two individuals in Group 2 stated that they were not proud of how they performed as a team. This showcases the importance of producing quality communication as a group. Li stated, "A great number of studies have found that the quality of group communication has a significant impact on the effectiveness of the subsequent group decision making" (Orlitzky & Hirokawa, 2001, p. 4). This is showcases through Group 3 believing they have good communication. Group 3 consistently stated that they solved the

conflict of being unsure of what to do by brainstorming ideas and communicating to decide the best plan of action together.

In conclusion, the study provided valuable insights on the importance of communication within a team to ensure success. Further research is needed to determine how or even if personality assessments should be implemented within organizations and educational institutions. Limitations that should be removed for future research would include more time and participants. A future study within the same research question would provide increased quantitative data if these changes were made, groups would have a longer time to demonstrate group dynamics. An increase in the number of groups would aid in helping support results, as it would then be able to be compared worldwide. Overall, qualitative data in the study suggests the theoretically positive results of personality assessments and discussions effect on communication and team outcomes.

Limitations & Future Research

Limitations that this study recognizes are the small sample size, limited time together working as a group, survey error, exploratory nature of the study, and self-reporting bias. This study consists of a small number of localized participants. The participants only equate to one class in total, as it is the most time efficient for everyone involved. Due to the substantially small sample, the study will not be comparable nationwide. In future research, the study could be done on a large scale, whether it is across a university or across the country. A large population that is randomized across several universities, age groups, etc. would be comparable across the nation.

Due to the short time the research team has together, it leaves the research team with less time to manage conflict, learn how to work together as a group, and take on roles within the

group. The primary goal of this study for the research team is to focus on the research and get the data pertaining to general team communication, while having limited time to meet and revise work. Future research could be done over several semesters or even years giving the research team the necessary time to prepare, test, and analyze the research.

The next limitation in the study is survey error. Although the research team attempted to avoid any survey mistakes, participants still misunderstood some survey questions, and some students had difficulties remembering which teams they were a part of during the activity. In the future, it would be wise to have the survey proofread by a large group of students to ensure there is no misleading or confusing information.

The study is exploratory in nature, and therefore the data is statistically insignificant. If the study were not exploratory, and the research team had access to more resources including time and participants, the data would be coming from a larger population and more participants. As mentioned in the results, the data when observed look significant, but due to working with small numbers in equations, the chi square test of significance proved insignificant. Due to the exploratory nature of the study, it is highly suggested and encouraged that the study is replicated and edited to test the theory on a large scale to produce useful data for institutions and organizations.

Lastly in the study, participants self-report through a team effectiveness survey. Measures indicate that participants often answer in a way to portray themselves in a good light. Despite having some quantitative data, most of the data is determined through personal opinion of each participant through the survey. This is a limitation to the testing results due to self-reporting bias.

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