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**ASSESSING STAGES OF TEAM DEVELOPMENT IN A SUMMER
ENRICHMENT PROGRAM**

A thesis submitted to
the Graduate College of
Marshall University

In partial fulfillment of
the requirements for the degree of
Education Specialist

School Psychology

by
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Marshall University
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ABSTRACT

Collaborative problem solving teams are an important component of successful schools. Groups move through a predictable pattern of development and it has been proposed that teams move through a similar development. The main objective of this study was to determine whether the teams that were formed during the Marshall University Summer Enrichment Program in 2012 displayed a pattern of development similar to group development. The study found that high performing teams develop similarly to groups.

Assessing Stages of Team Development in a Summer Enrichment Program

CHAPTER 1

NATURE AND SCOPE OF THE STUDY

There is an increasing push in schools across the nation today to emphasize collaboration among colleagues and teaming. This emphasis for collaborative teaming is perhaps the result of the creation of the Individuals with Disabilities Education Improvement Act (IDEA) and state policies similar to West Virginia's Policy 2419 which limited the influence of any single professional making decisions and recommendations for students being evaluated for and placed into special education programs. Because of this push, instruments for measuring teaming are being developed to help professionals enhance and evaluate their teaming skills. Although the stages groups move through during their development have been researched and clearly show the procession they go through while becoming highly effective, research on team development is less well-known. Research indicating whether teams go through these same stages or something similar to groups is not well documented and is the focus of this research.

Stages of Group Development

Groups go through stages during their development in order to achieve effective cohesion (Johnson, 2010). Tuckman coined a mnemonic for this four-stage process: forming, storming, norming, and performing (Johnson, 2010). He proposed that a successful group must go through all of these stages in order to be a successful, functioning group. Yet sometimes a group stays fixed in a single stage and the group stops moving forward never reaching the level of a performing group (Krieg & Stroebe, 2013).

The first stage of change in a group is called “forming.” In this stage there are issues of anxiety yet excitement about possible outcomes. Many group members experience dependence on each other and have uncertainties about the driving motivations for the change (Johnson, 2010). Team members typically wonder how they fit into the group and wonder what kind of expectations are expected of them because of their membership in the group (Taraschi, 1998). To make this stage smooth for group members, the group facilitator should write clearly defined roles for the team members and the facilitator (Taraschi, 1998). These role descriptions will allow group members to be less dependent on the facilitator and feel more responsible for their group duties.

The second stage of change within a group is called “storming.” In this stage there are typically issues with power and control. Conflicts arise more frequently in this stage. Group members may have feelings of incompetence and confusion (Johnson, 2010). The group members may begin to feel frustrated because of the difficulty of the job and because many members will begin to feel as though they want more of a “say” in group matters. In this stage some group members may feel as though they bump heads with one or more group members. In order for the group to progress through this stage, the group facilitator must help the team members address their differences in a positive manner (Taraschi, 1998).

The third stage of change is referred to as “norming.” Group members typically begin to see the accomplishments the group has made, and they typically begin to trust and respect the other members (Johnson, 2010). This is the stage group members become cohesive. Group cohesion is the strength of the bond uniting group members or the field of forces which act on members to remain in the group. Group cohesion determines how well a team will stick together. Group cohesion is like the glue of a group. The stronger the group cohesion is, the stronger the

group. Because of group cohesion, group members encourage each other more frequently, display active listening techniques and recognize and discuss their differences (Taraschi, 1998). Group members trust each other. Because group members are so open to one another, this becomes a problem-solving stage (Krieg & Stroebe, 2013). At this stage, it is important for the group facilitator to uncover unspoken issues and to encourage not only group-critique but self-critique (Taraschi, 1998).

In the fourth and final stage of group change (a stage that some groups never fully reach), the group is considered to be performing. In the performing stage, group members continually accomplish their goals and continue to maintain momentum in meeting goals (Krieg & Stroebe, 2013). The tasks that required extraneous work at the beginning appear to be effortless and group members begin to work interdependently (Taraschi, 1998). All successfully functioning groups move through the four stages of development described above; below is a description of teams and a theory about the stages they move through.

Teams: Definition and Stages

Like groups, teams exist in many organizations and in many different ways. People who are part of a team and share a common direction get where they are going quicker and easier because they are traveling on the trust of another (Krieg & Stroebe, 2013). In education, multidisciplinary teams were mandated for special education assessment and placement by public law 94-142 in order to limit the influence of any single professional by requiring input from multiple professionals and parents (Huebner, 1991). The teams were designed to provide the following benefits: greater accuracy in assessment, classification, and special education decisions and a forum for the sharing different values and perspectives. Today these teams identify and resolve academic and social problems experienced by students, often within a

curriculum-based measurement and response-to-intervention (RTI) framework (Newton, Horner, Todd, Algozzine, R., & Algozzine, K., 2012). Teams are essential to schools because school teams “provide a context for combining diverse perspectives and expertise to solve problems, improve decision making, build collaborative relationships, and respond to changing circumstances” (Korinek & McLaughlin, 1996, p. 41). If problem solving teams (i.e. IATs, SATs, etc.) are utilized correctly they are beneficial to principals, teachers, students, parents and the school as a whole (Myers & Kline, 2001).

Krieg and Stroebe (2013) have proposed that teams also go through predictable stages similar to groups. Krieg and Stroebe (2013) assert that group cohesiveness and team collaboration are equivalent concepts. A team’s ultimate goal is effective collaboration. The collaboration in teams appears similar to the cohesiveness found in groups. The development of teams should look like groups because all teams are groups but not all groups are teams.

A team of individuals moves through a predictable pattern of development. At first a team begins at a stage of distrust. At this stage, anxiety and resistance are high but team participation and team cohesiveness are low (Krieg & Stroebe, 2013). Team members are dependent on others and display uncertainty. It is important at this stage for there to be structure and meeting rules. Team roles should be well defined and team members should be invited to participate equally. Dominate behaviors are to be avoided in this stage.

Next, the developing team moves into a stage called storming (Krieg & Stroebe, 2013). Anger and resistance are common during this stage. Team members feel incompetent and frustrated, and because of these feelings team cohesion is low and resistance to others’ input and change is high. Members are only moderately participating. It is important at this stage to build trust and communication by making contributions and finding a moderator for dissenting voices.

After storming a team may move into the integration stage. In this stage, the team becomes a potential team (Krieg & Stroebe, 2013). Team members in this stage begin to build independence and delegate more responsibility. Team members are challenged to reach higher standards. The teams recognize that there are significant needs and the group tries to improve its performance. In this stage, team members share responsibility, and together they build confidence in their ability to reach their goal (Krieg & Stroebe, 2013). The team is not quite at the level of mutual accountability.

In the final stage of development, the team becomes a working team (Krieg & Stroebe, 2013). Team members are typically supportive of one another and actively participate in team activities (Krieg & Stroebe, 2013). They possess complimentary skills and are committed to a common purpose, goals, and an approach for which they hold themselves mutually accountable. They continue their problem-solving focus exhibited in the third stage and continue to develop interpersonally. Group participation and group cohesiveness are high in this stage, whereas anxiety and resistance are low. Once a group reaches this stage, it is important for members to continue to share leadership, recognize accomplishments and maintain momentum in reaching goals.

Marshall University Summer Enrichment Program and Teams

Part of a School Psychologist's role in a school system is participating in effective problem-solving teams. The 2012 Marshall University Summer Enrichment Program (MUSEP) had seven functioning problem-solving teams. The teams were designed to prepare students for participation in the problem-solving teams seen often in traditional public schools. Most teams in the summer enrichment program consisted of: two school psychology students, one school counselor student, one reading specialist, and several special education teachers. Parents were

also an important part of the program; they filled out surveys about their children, indicating their concerns and their children's strengths. Several parents took part in the multi-disciplinary evaluations that were given to a select number of students as well.

The MUSEP is a summer program that serves children in kindergarten through high school level in the Charleston, West Virginia area over a five week period. MUSEP was designed not only as a hands-on, practical experience for its graduate students but as a way to serve the Charleston community (Krieg, Meikamp, O'Keefe, & Stroebel, 2006). The students served in the program were assigned to classrooms based on their grade level; however, the problem-solving team responsible for each classroom specifically tailored academic and behavioral interventions. For example, in the classroom that was made up of the older students (team 7) the students' ages ranged from 13 to 17. The students in that classroom attended the program for a variety of reasons. Some students attended because they enjoyed being challenged by academics and socializing with their peers, whereas other students were in the program because they missed too many days of school and they needed the additional school time to move onto the next grade. The summer program focused on providing a rich educational experience in all the key subject areas (reading/literature, math, science, art, and history). In order to achieve this end, students were placed in small groups based on their ability, some students who were highly advanced or significantly behind their peers worked one-on-one with teachers to further develop their skills. After the summer program ended, many students were shown to make gains in the areas of reading and math.

The teams formed during the MUSEP were responsible for developing ability-appropriate educational interventions and targeted behavioral interventions for their students as collaborative teams (Krieg, et al., 2006). Team members worked together to place students in appropriate

small groups based on their ability (the scores the students obtained on curriculum-based assessments). They created curriculum appropriate for students who were outliers (they were significantly higher or lower than their peers) in specific areas (Krieg, et al., 2006). Team members also worked together to develop preventative behavioral interventions and individual behavioral interventions for students who needed more targeted interventions. Crisis interventions were also developed as needed.

Evaluating Teams in the MUSEP

Over the years, the MUSEP has worked to develop an instrument to evaluate teaming. In conjunction with an expert rater, Conaway (2011) attempted to study whether the Thermometer (an evaluation tool used for several years in the program) actually measured team collaboration.

Conaway (2011) developed the Expert Rating Scale in hopes of creating a more descriptive approach to measuring team collaboration than the thermometer offered. Although the thermometer appeared effective, its validity and reliability had not been systematically evaluated. The thermometer asked respondents only two questions using a likert scale format at the end of each week. “How have you done this week? And, “How did your team do this week?” Using research from peer reviewed journals and other sources, Conaway developed the Expert Rating Scale in order to help professors and team members evaluate team collaboration in the MUSEP. He also developed the new instrument, the Expert Rating Scale, hoping to find items which were most predictive of team collaboration.

Conaway (2011) did not find the thermometer to correlate highly with the Expert Rating Scale he developed. When he compared the questions on the Expert Rating Scale to one another, he found that 5 of the 17 questions on the Expert Rating Scale displayed a correlation with themselves above .50. He termed these questions “the collaboration questions” and suggested

that the 5 questions be asked on future surveys in order to measure collaboration between team members in the MUSEP and that the thermometer be replaced by the five questions.

Pyles (2012) followed the advice of Conaway and utilized the five questions he found to be most correlated with team collaboration. Using these questions, she developed a questionnaire called The Collaboration Survey that all team members in the MUSEP completed on the last day of the program. Each of the questions touched on one of the five components that were critical to a team (Pyles, 2012), including: components of structure, communication, trust, function, and recognition. In order to determine which of the instruments was a better measure of team collaboration, she included expert raters in her study. In her study, she found that the Collaboration Survey did not add any additional benefit to measuring effective teaming than the team thermometer question, indicating that the team thermometer question was still the best measure of teaming. She found that there was a 77% chance that a team, who was ranked high or low on the team thermometer question, would be ranked high or low by the expert raters. Her study shows a significant correlation between the team thermometer question and the individual thermometer question. The study indicated the team thermometer question correlated significantly with the Expert Rating Scale. Pyles (2012) encouraged individuals who wanted to study the collaboration of teams to give the Collaboration Survey (or any rating scale about collaboration) each week, instead of only on the last day of the program. She also encouraged future study participants to repeat the study with weighted scores since each of the five items were not equally important to group success.

Following the publication of Pyles' (2012) study, the faculty of the School Psychology program at Marshall University decided to develop an even more research-based tool to measure team effectiveness for the upcoming 2012 MUSEP. Research in *The Orange Revolution: How*

One Great Team Can Transform an Entire Organization by Gostick and Elton (2010) lead the experts to create another instrument, designed specifically for measuring team cohesiveness. The instrument was called the Team Cohesiveness Evaluation. It asked team members to answer 5 likert-scale items concerned with goal setting, communication, trust, mutual accountability, and recognition. Team members, in response to Pyles' (2012) advice, completed the question at the end of each week, at the same time they completed the weekly thermometers.

Gostick and Elton (2010) indicate that great teams display five important traits: goal setting, communication, trust, accountability, and recognition. When respondents to a survey indicated all of these traits were met, 92 percent of them indicated they were satisfied with their role or job. The first trait, goal setting allows team members to utilize their personal strengths while focusing on group goals. It is important for personal goals and team goals to align. If personal and team goals do not align there are hefty consequences and dysfunction ensues. Teams are likely to separate without aligned goals (Gostick & Elton, 2010). Effective communication in an organization is important. Clear and concise communication is just as important as frequent communication. Communication must be open, honest, and clear to everyone so the team members understand each other's intention and motivation. Effective teams are careful in their promises, admit mistakes, respond promptly to team member's requests for information, and recognize each other's achievements publicly and proudly. Trust is very important to teams, "When team members dismiss others' talents and contributions and do not believe in their abilities or their intentions, trust and communication are diminished" (Gostick & Elton, 2010). Great teams ask for assistance, offer help as requested, become vulnerable, take ownership of their mistakes, and proactively share valuable information with team members. Mutual accountability allows team members to take personal responsibility for their team

decisions and actions. When there is an issue that arises with someone in a team, a mutually accountable team makes it a point to find ways to help the individual. The last trait of an effective team is recognizing the efforts of team members and appreciating the accomplishments of individuals one-on-one and publicly in front of the organization (Gostick & Elton, 2010). According to Gostick and Elton (2010) all of these traits are important to group functioning and team collaboration. Data show employees become more engaged if they believe their teams, leaders, and organizations set clear goals, communicate openly, build trust, hold them accountable, and recognize great work. A team that incorporates the five essential traits will find that almost nine out of ten employees are fully engaged (Gostick & Elton, 2010).

Collaborative teams are essential to a well performing school. A recent study evaluated the effectiveness of cohesive teams by studying the improvement of the reading scores in the MUSEP. The study compared the team member's ratings of team cohesiveness to their students' achievement on the DIBELS assessments. There was a positive correlation shown between team cohesiveness (reported by team members) and student achievement over the course of the program (Stotler, Stroebe, & O'Keefe, 2008). Interestingly, when someone who was unfamiliar with the students, gave the students the DIBELS assessment, students did not perform as well on the assessment as they had when it was given to them by someone familiar, that they had developed a relationship with. Bodwell (2002) indicates that in schools where positive relationships are developing among staff, there is a greater deal of latitude in their collaborations, there is likely less tension and the school as a whole likely has a greater ability to change than if the relationships were not positive. There is more latitude when positive team collaboration was developing (Bodwell, 2002).

Purpose of this Study

The MUSEP uses teams to provide instruction to students and prepare them for their work in schools. This study was created to help develop a better instrument to measure team collaboration/group cohesiveness in the MUSEP. The purpose of this study is to determine whether the TCE is a better predictor of team collaboration than the thermometer. This study seeks to discover whether the weekly temperature rating scales completed by team members show a pattern of development that are typically seen in group development as predicted by Krieg & Stroebe (2013). This study will be the first study to determine whether teams follow the same pattern of development that groups follow (storming, forming, etc.) or a similar pattern. Because it is theorized that group cohesion is equivalent to team collaboration, an upward moving slope common to group development should be seen in team development. This study will determine if this same pattern of development also develops in the scores obtained from the Team Cohesiveness Evaluation (TCE) Scale given by team members. It is also important to determine whether the temperature rating scales given to team members correlate with the expert rater's team rankings of team cohesiveness. Based on the research, the expert rater's rankings and the temperature rating scale should be correlated.

Research hypotheses are as follows:

1. The scores obtained from the TCE Scale rated by team members and the thermometer scores will be highly correlated.
2. The thermometer rating scale scores will correlate with the expert raters' team rankings.
3. The thermometer team question responses overtime will show a pattern similar to group development.

4. The TCE Scale rated by team members in the summer program will show increasing levels of team cohesion that correlates with group development.
5. Measures of teaming (TCE and the thermometer team question) rated by team members in the summer program will show increasing levels of team cohesion that correlates with an expert ranking of high performing teams and low performing teams.

CHAPTER 2

METHOD

Participants

Fifty-nine graduate students participated in the Marshall University Summer Enrichment Program. The Expert raters included three professors from the summer program.

Instruments

Thermometers. The thermometer is an instrument in the summer program that evaluates team collaboration. It asks each team member two questions: how they believed they performed during the week, and how they believed their team performed. This instrument was designed in a likert-scale format, on a scale of 1 to 10, with 1 being poor and 10 being excellent (See Appendix B). The surveys were filled out anonymously, however team members were required to write the team number on the top of the surveys to verify receipt of the surveys from the teams. This thermometer has been shown to correlate highly with expert raters (Pyles, 2012) and student reading achievement (Stotler, et al, 2008) thus demonstrating construct validity.

The Team Cohesiveness Evaluation (TCE) survey. The TCE (See Appendix A) was utilized to assess team cohesiveness in the areas of goal setting, communication, trust, mutual accountability, and recognition based on the research from Gostick and Elton (2010). The survey consists of 5 likert-scale items, each related to one of the 5 areas important to a cohesive team. The respondents were asked to rate each item on a scale of 1 to 7, with 1 being poor and 7 being excellent. A score of 4, which would indicate neutral feelings, was not an option for respondents. The surveys were filled out anonymously, however team members were required to write the team number on the top of the surveys to verify receipt of the surveys from the teams.

Procedure

At the end of each week during the MUSEP, all of the graduate student team members from each of the teams were asked to evaluate how they believed their group performed on the TCE scale (See Appendix A). On the TCE, students were asked to give a response for each of five areas of team cohesiveness including: goal setting, communication, trust, mutual accountability, and recognition. The team members also completed the thermometer at the end of each week. The rating scale included two questions which the team members responded to.

Not only were team members required to fill out weekly surveys about their team's performance and cohesiveness during the MUSEP, but three professors who supervised the enrichment program also evaluated the teams by ranking them in order based on their collaboration practices and team-cohesiveness. At the conclusion of the program, each of the experts independently ranked the teams based on their performance. The teams were ranked in order from 1 to 7. After the professors individually ranked the teams, two of the team members, discussed their rankings (the top two and bottom two groups matched each of the professors' ratings) and developed a ranking of 1 to 7 that reflected the experts' collaborative objective ratings. These rankings were given to teams not only for team performance evaluations, but to see whether expert ratings of team cohesiveness correlated with the teams' perception of their team cohesiveness and collaboration efforts.

Data Analysis

Data were analyzed using Statistical Product and Service Solutions (SPSS). The Pearson Product Moment Correlation was utilized to determine a correlation between TCE scale scores and the thermometer team scores, and to determine a correlation between the thermometer team question and the thermometer question concerned about the individual team member. To

determine a correlation between the thermometer team question and expert ratings, a Point Biserial correlation was employed.

Weekly thermometer team scores were graphed based on their average for the week divided by the number of respondents. To plot the weekly TCE scores, an average for each week was calculated and graphed. To plot teams that were ranked “high” and “low” performing teams by expert raters, a weekly average was computed for each team marked “high” or “low.” This average was then divided by the number of respondents in each of the teams, and the teams’ average weekly TCE scores were then plotted.

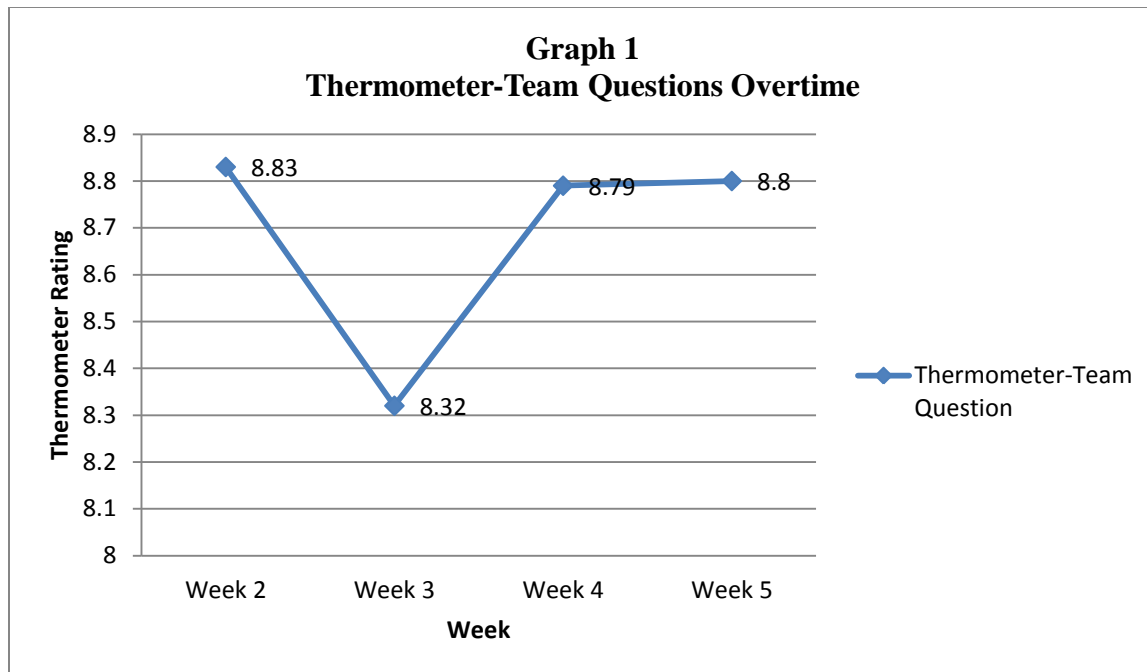
CHAPTER 3

RESULTS

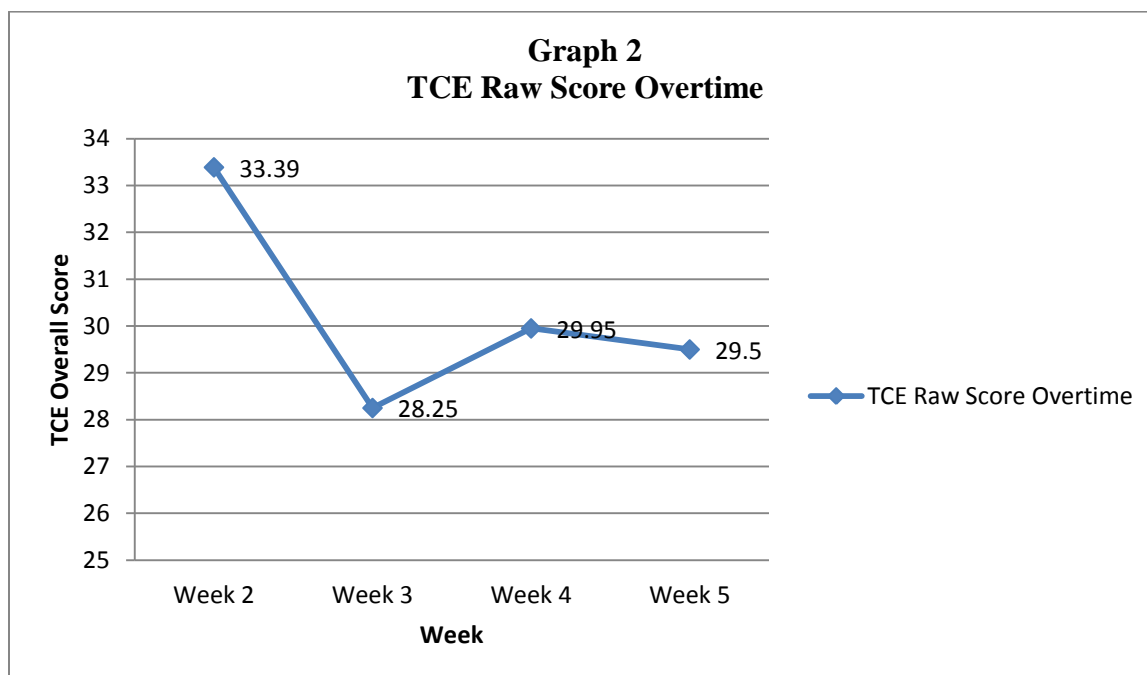
There is a moderate to strong correlation between the TCE raw scores gathered throughout the program and the thermometer team question. This correlation is exhibited at the .572 level (see Table 1). The correlations for each week of the MUSEP were also measured. There is a moderate to strong correlation between TCE raw scores and thermometer team scores during week two of the program. This correlation is shown at the .572 level (see Table 2). There is a weak correlation ($r = .301, p < .001$) between TCE raw scores and the thermometer team question during week 3 (see Table 3). There is also a relatively weak correlation between the TCE raw scores and the thermometer team question from week 4 ($r = .469, p < .001$), (see Table 4). There is a very strong correlation between TCE raw scores and the thermometer team question at week 5 ($r = .885, p < .001$), (see Table 5).

The team thermometer question from the last week of the program shows a weak correlation with the expert raters' rankings of team performance ($r = .257, p < .001$), (see table 6). A Point Biserial correlation was also utilized to see if a correlation existed between all of the thermometer team questions obtained throughout the program and the expert raters' rankings, a weak correlation is shown for this comparison as well, ($r = .340, p < .001$), (see Table 7). There was also a moderate to strong correlation between the thermometer individual and thermometer team questions ($r = .638, p < .001$), (see Table 8).

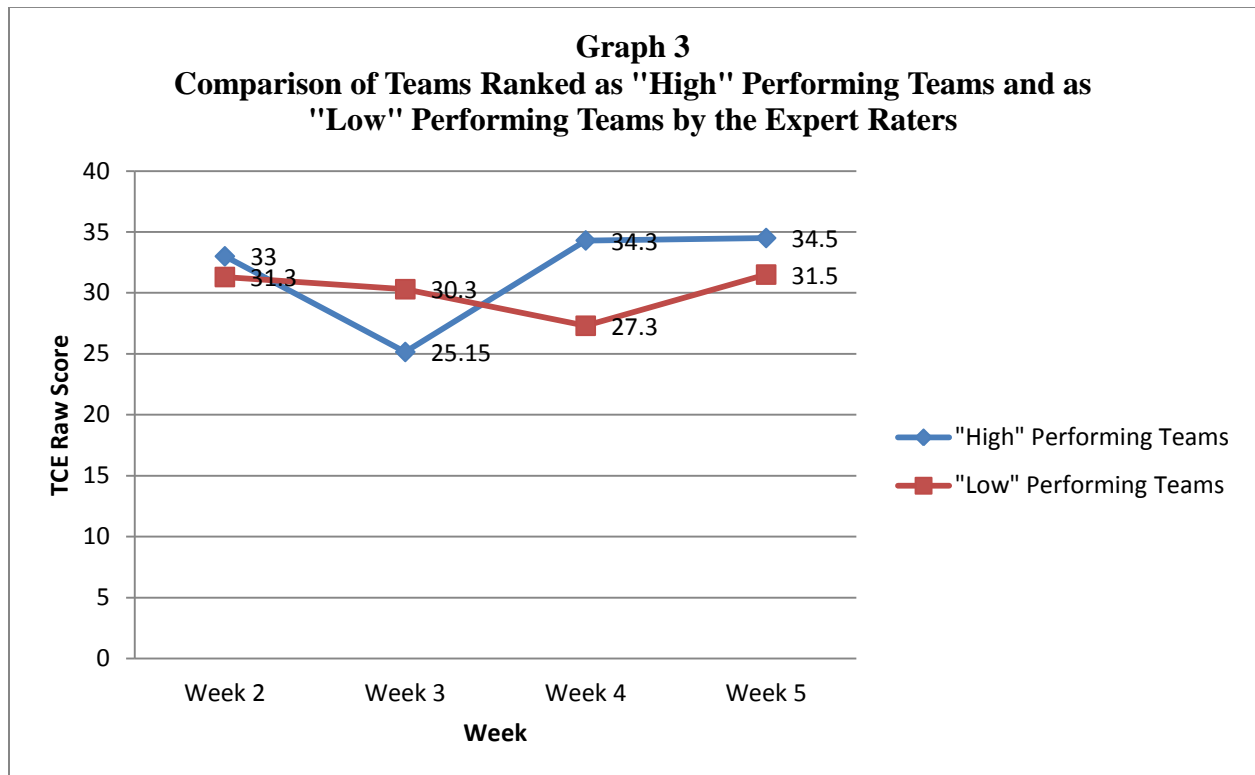
The thermometer team questions show a pattern similar to the typical pattern of development for groups (see Graph 1). When plotted, the temperature rating question about how the team is doing shows a positive, linear slope. The line shows a dip as well, during the third week of the program, which is consistent with the storming stage in group development theory.



The TCE raw score shows a negative, linear slope line (see Graph 2). This indicates that the TCE raw score over time does not show a pattern of team development similar to the group development theory explained by Taraschi, (1998).

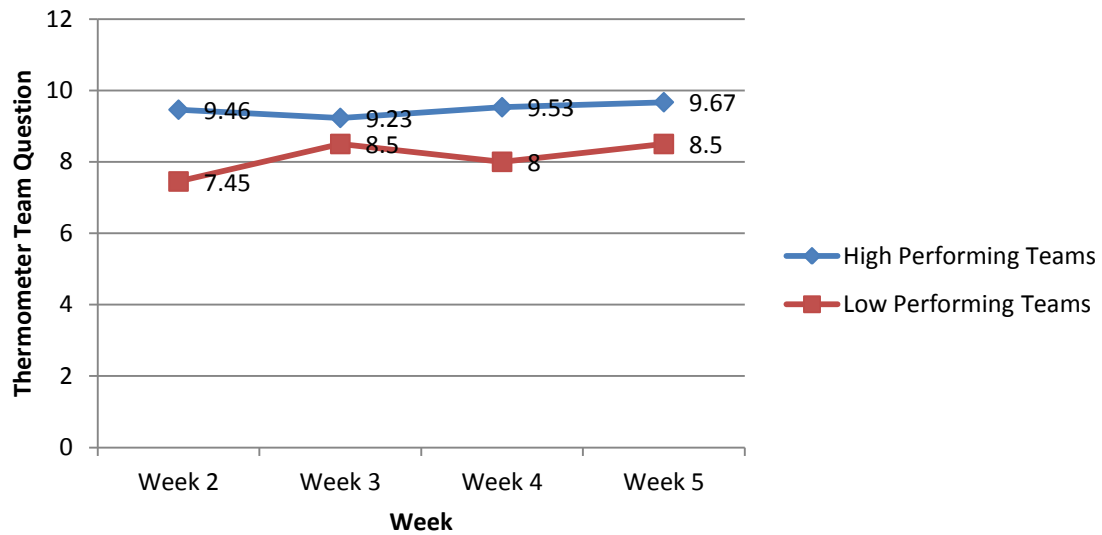


When observing the TCE scores plotted overtime, the teams ranked as “high” performing teams display a pattern of development that mimics typical group development (see Graph 3). There is a baseline (forming), a dip (storming), and increasing positive stability over time (norming and performing). The teams ranked as “low” performing teams do not display this same positive, linear slope.



When looking at the thermometer team question plotted over time, the teams ranked as “high” performing teams also display a pattern of development that mimics typical group development (see Graph 4). There is a baseline (forming), a dip (storming), and increasing positive stability over time (norming and performing). The teams ranked as “low” performing teams do not display this same positive, linear slope. Looking at the thermometer data, it appears that the low performing teams hit the storming stage later (the group starts out with a low rating and continues to build).

Graph 4
Comparison of Teams Ranked as "High" Performing Teams and
as "Low" Performing Teams by the Expert Raters



CHAPTER 4

DISCUSSION

The TCE raw score displays a moderate to strong correlation with the thermometer team question ($r = .572, p < .001$). This indicates that the TCE measures a similar construct that the thermometer team question measures (at a .572 level). This construct as Krieg & Stroebe (2013) proposed, indicates that perhaps group cohesion is equivalent to team collaboration. As the thermometer measures group collaboration and the TCE measures team cohesiveness. Some of the weekly TCE raw scores correlate with the thermometer team question. Week 2 shows a moderate to strong correlation ($r = .572, p < .001$) between the TCE raw score and the team thermometer question. There is a very weak correlation between the TCE raw score and the team thermometer question during week 3 ($r = .301, p < .001$). This weak correlation may be the result of teams moving into the stage that is similar to the storming stage in groups. The high performing teams at this point in time indicated that their performance was the worst during the third week (see Graph 3). The TCE scores overall, for all groups were also the lowest during the third week (see Graph 2). There is a stronger correlation between the TCE raw score and the team thermometer question during week 4, but it is a moderate correlation ($r = .469, p < .001$). Week 5 shows a very strong correlation between TCE raw scores and the thermometer team question ($r = .885, p < .001$). Because the last week's thermometer team question has the highest correlation, it is possible that the thumb test during the last week is most representative of how cohesive the group felt throughout the program.

Contrary to the findings Pyles' (2012) discovered during her study, the team thermometer question from week 5 in this study, does not correlate strongly with expert ratings. There is a correlation of .257, indicating a very weak relationship between the team thermometer question

during the last week of the program and expert rankings. There is a stronger correlation between the two variables when the thermometer team question scores from the entire program are compared to the expert ranking. This weak correlation is at the .340 level. These weak correlations between the team thermometer question and expert rankings may have something to do with the method the experts used to evaluate the teams.

As Conaway (2011) discovered, there is a moderate to strong correlation between the thermometer team question and the thermometer independent question ($r = .638, p < .001$). This correlation between the thermometer team question and the thermometer independent question indicates that the questions have a moderate to strong relationship with each other.

As hypothesized, the thermometer team question during the entire program shows a similar slope of development to that of group development. This positive, linear slope indicates that teams and groups develop similarly over time.

The TCE raw score over time does not show the similar pattern of group development. This may be because there were not enough data points collected. If the program was a few weeks longer, the pattern of typical group development may have been displayed. However, when the teams that were labeled as “high” performing teams by the expert raters were compared to the teams that were labeled as “low” performing teams, there is a clear distinction. The high performing teams’ TCE scores show a slope similar to that of group development. The dip, or the storming stage, is even seen in the slope of development over time. The low performing teams appear to have hit their dip at a later point in time. Their recovery is also later. This dip may indicate that low performing teams get stuck in a certain stage as Krieg & Stroebe (2013) theorized, or that they perhaps develop slower than teams that are high performing.

A pattern of development that is typical in group development is also seen with the “high” performing teams when the team thermometer questions are plotted overtime but not with “low” performing teams. When looking at the plotted data points of the “low” performing teams, they do not appear to hit a dip, according to the thermometer. It is possible that these “low” performing teams are still stuck at the forming/distrust stage and never really reach the storming stage. A team can never become a working team until its members face their problems head on and work them out effectively.

In future studies it may be beneficial for researchers to measure the development of teams over a longer period of time. All teams may show the typical pattern of group development when there are more data points collected. Because we know that groups develop at different rates, (Krieg, Simpson, Stanley & Snider, 2002) a study with a longer time frame may be helpful in showing this pattern of group development. Although Pyles (2012) discovered that the thermometer team question was most highly correlated with the expert raters’ rankings, it was not seen in this study. The low correlation may be because there was not a discussion about what is important to teaming prior to the expert raters’ rankings and there was not a guiding document to help the raters. In order for researchers to see a correlation between the two measures, it may be beneficial for expert raters to create a formal assessment instrument of teams that would help them evaluate the teams on the same key characteristics. This formal assessment would allow expert raters from different years to measure the same characteristics from year to year. 1 of 3 raters was not trained in teaming and raters did not use shared criteria to pick effective teams. This procedure is different from previous years and may have impacted the accuracy of selecting "good" collaborative teams. The raters used their own biases which may be based on, for example, an absence of conflict within a team rather than the teams’ ability to resolve conflict.

APPENDIX A

Team Cohesiveness Evaluation

Team Number _____

Date _____

1. Goal Setting

- A. Understand mission vision, objectives, goal setting
- B. Demonstrate planning toward goals and objectives
- C. Effective use of time
- D. Effective Use of Resources

1 2 3 5 6 7

2. Communication

- A. Direct, open, honest
- B. Changes in plans are communicated prior to implementation
- C. Members are open to input
- D. Members interact primarily to share information
- E. Good listening skills

1 2 3 5 6 7

3. Trust

- A. Each member believes what other members are saying
- B. Appear to collaborate versus cooperate
- C. Delegate responsibility versus "I'll take care of it"
- D. View conflict as positive

1 2 3 5 6 7

4. Mutual Accountability

- A. Share decision-making
- B. Accept feedback from each other
- C. Separate person's ideas from feelings about that person

1 2 3 5 6 7

5. Recognition

- A. Genuine appreciation of each other's accomplishments
- B. Recognize and appreciate complimentary role functions
- C. Accepts feedback from supervisors

1 2 3 5 6 7

Appendix B
Temperature Rating Scale

Date _____

Team _____

Please answer the following questions using a scale from 1 to 10:
Circle your response.

1 = poor 10 = excellent

1. How have you done this week? 1 2 3 4 5 6 7 8 9 10

2. How did your team do this week? 1 2 3 4 5 6 7 8 9 10

Appendix C



Office of Research Integrity

April 11, 2013

Sandra S. Stroebel Ph.D. NCSI*
Associate Professor/Program Director
School Psychology Program
Marshall University
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Dear Dr. Stroebel:

This letter is in response to the submitted abstract for the evaluation of the Marshall University Summer Enrichment Program (MUSSEP). After assessing the abstract it has been deemed not to be human subject research and therefore exempt from oversight of the Marshall University Institutional Review Board (IRB). The Code of Federal Regulations (45CFR46) has set forth the criteria utilized in making this determination. Since the information in this study consists solely of a program evaluation involving deidentified data it is not human subject research and therefore not subject to Common Rule oversight. If there are any changes to the abstract you provided then you will need to resubmit that information for review and determination.

I appreciate your willingness to submit the abstract for determination. Please feel free to contact the Office of Research Integrity if you have any questions regarding future protocols that may require IRB review.

Sincerely,

Bruce F. Day, Ph.D., CIP
Director
Office of Research Integrity

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Table 1

The Relationship between TCE raw and the Thermometer Team Question

Correlations		TCERaw	THERMteam
TCERaw	Pearson Correlation	1	.572**
	Sig. (2-tailed)		.000
	N	159	159
THERMteam	Pearson Correlation	.572**	1
	Sig. (2-tailed)	.000	
	N	159	159

** . Correlation is significant at the 0.01 level (2-tailed).

Table 2

The Relationship between the TCE Raw Score and the Thermometer Team Question from Week 2

Correlations		TCERaw	THERMteam
TCERaw	Pearson Correlation	1	.572**
	Sig. (2-tailed)		.000
	N	159	159
THERMteam	Pearson Correlation	.572**	1
	Sig. (2-tailed)	.000	
	N	159	159

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3

The Relationship between the TCE Raw Score and the Thermometer Team Question from Week 3

		TCERAW	THERMteam
TCERAW	Pearson Correlation	1	.301
	Sig. (2-tailed)		.053
	N	42	42
THERMteam	Pearson Correlation	.301	1
	Sig. (2-tailed)	.053	
	N	42	42

Table 4

The Relationship between the TCE Raw Score and the Thermometer Team Question from Week 4

Correlations		
	TCEraw	THERteam
TCEraw	Pearson Correlation	1
	Sig. (2-tailed)	.469**
	N	.003
THERteam	Pearson Correlation	.469**
	Sig. (2-tailed)	1
	N	.003

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5

The Relationship between the TCE Raw Score and the Thermometer Team Question from Week 5

Correlations		
	TCEraw	THERteam
TCEraw	Pearson Correlation	1
	Sig. (2-tailed)	.885**
	N	.000
THERteam	Pearson Correlation	.885**
	Sig. (2-tailed)	1
	N	.000
	N	36

** . Correlation is significant at the 0.01 level (2-tailed).

Table 6

The Relationship between the Thermometer Team Question from the Fifth Week of the Program and the Expert Raters' Ratings Using a Point Biserial Correlation

Correlations			
		THERteam	expert
THERteam	Pearson Correlation	1	.257
	Sig. (2-tailed)		.130
	N	36	36
expert	Pearson Correlation	.257	1
	Sig. (2-tailed)	.130	
	N	36	36

Table 7

The Relationship between the Thermometer-Team Question from the Entire Program and the Expert Raters' Ratings Using a Point Biserial Correlation

Correlations		THERMteam	EXPERT
THERMteam	Pearson Correlation	1	.340**
	Sig. (2-tailed)		.000
	N	159	159
EXPERT	Pearson Correlation	.340**	1
	Sig. (2-tailed)	.000	
	N	159	159

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8

The Relationship between the Thermometer Team Question and the Thermometer-Individual Question

Correlations				
			THERMteam	TERMIND
Spearman's rho	THERMteam	Correlation Coefficient	1.000	.638**
		Sig. (2-tailed)	.	.000
		N	159	159
	TERMIND	Correlation Coefficient	.638**	1.000
		Sig. (2-tailed)	.000	.
		N	159	159

** . Correlation is significant at the 0.01 level (2-tailed).