

Impact of Group Development Knowledge on Students' Perceived Importance and Confidence of Group Work Skills

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Abstract

This study explored the impact of emphasis on the group development process, as developed by Tuckman and Jensen (1977), on the perceived importance of and confidence in group work skills, as well as students' perception of group work use in the collegiate classroom. The purposive sample utilized in this study included 33 undergraduate students enrolled in an introductory leadership and service course at a southern, land-grant institution. Knowledge of the group development process enhances a student's perceived importance and confidence in group work skills. The emphasis on group development process also positively impacted students' perception of group work being utilized in the collegiate classroom. The importance of group work skills continues to be reflective of the demand from employers; educators must continue to develop these transferable skills in today's students. Although relevant across disciplines, leadership educators should take a leading role in developing such skills in students.

Introduction

Expectations of today's college graduates continue to emphasize leadership and experience, as top entry-level positions carry high standards for students regarding strong transferable skills to be competitive. Employers desire job candidates to have polished communication skills, leadership skills, teamwork skills, initiative, interpersonal and social networking skills, problem solving skills and analytical skills, among others (NACE, 2010). As the facilitator of knowledge acquisition, higher education must realize the responsibility colleges and institutions have to provide each generation of students with the knowledge and experiences necessary to succeed in today's American society (Astin & Astin, 1999). Leadership educators recognize the importance of leadership coursework and programming to prepare students to enter society. Mu and Gnyawali (2003) emphasize the crucial step development of effective team work skills with all

walks of people is to career success. Blackwell, Cummins, Townsend, and Cummings (2007) note the numerous formal and informal opportunities available at universities to enable students to connect experience and theory in the educational setting. Educators across many disciplines choose to incorporate group projects or other forms of collaborative or team-based learning in an effort to create formal group experiences for transferable skill development. Ricketts, Bruce, and Ewing (2008) express a key benefit of including group projects in core classes is the development of team building skills; however, the authors emphasize that students may be missing an important connection between developing team building skills in the classroom environment and their transferability to the workplace. The purpose of including group learning in the classroom is, in essence, to prepare students for real-world experiences (Siciliano, 2001).

Cooperative learning encourages the development of skills, such as working with a diverse array of students, that individual assignments do not offer (Bobbitt, Inks, Kemp, and Mayo, 2000). A dual purpose is also served when group projects are based in service-learning. Burkhardt and Zimmerman-Oster (1999) highlight the use of co-curricular experiences that connect to formal learning for students, which creates a strong impact on both the student and the community (as cited in Astin and Astin, 1999). With such projects, students are able to experience a relatively unstructured project and develop the initiative that will be required of them in the future (Holter, 1994). Thus we take notice of the importance of group work skill development in students, formally and informally, throughout their college experience and continue to question the most effective means of achieving student acquisition of these career-oriented skills within the environment of higher education. Astin and Astin (1999) note the role of university faculty to influence and carry out research and practice of believed effective methodologies or approaches to leadership education. Extensive research has been conducted on the methods of cooperative learning in the classroom, benefits accrued through the cooperative learning experience, and the role of the instructor in facilitating cooperative learning (Colbeck, Campbell, and Bjorklund, 2000; Hassanien, 2007; Cottell and Millis, 1993; Cooper, Prescott, Cook, Smith, Mueck, and Cuseo, 1990; Kreie, Headrick, and Steiner, 2007; Haberyan, 2007; Halpern, 2000). A minimal but increasing amount of research has been conducted on student perceptions of group work in the collegiate classroom (Payne and Monk-Turner, 2006; Rassuli and Manzer, 2005; Pauli, Mohiyeddini, Bray, Michie, and Street, 2008; Coers and Lorensen, 2009). However, there is a void within the research of how specific group development process theories impact a student's experience with collaborative learning or group work in the collegiate classroom

The purpose of this study is to determine the impact of Tuckman & Jensen's (1977) theory of group development process through the following research objective and questions:

1. Describe identified demographic characteristics, including gender, academic status, and previous group work experience.
2. Does knowledge of the Tuckman & Jensen (1977) theory of group development process impact student importance in group work skills?
3. Does knowledge of the Tuckman & Jensen (1977) theory of group development process impact student rating of confidence of group work skills?
4. Does knowledge of the Tuckman & Jensen (1977) theory of group development process impact student perception of group work in the collegiate classroom?

Group projects are utilized in numerous college courses today, many without providing direction on group development to students. Instructors may assume students understand the basic tenants

of working collaboratively with their peers on an assignment, and not considering scheduling difficulties among student group members and potentially multiple class projects. By examining the impact of Tuckman & Jensen's (1977) theory of group development process on student perception of group work in the collegiate classroom, confidence in group work skills, and perceived importance of group work skills, the researcher will determine the role of such knowledge to the practice of using group projects in the college classroom. Today's generation of college students are a connected group of students through multiple medias, thus the intentional and focused use of group work in the classroom is of great importance to prepare students to begin their professional career. The implications of such data could transform the manner in which instructors utilize group projects in the collegiate classroom, and potentially better develop students into the team players desired by businesses across America.

Review of Literature

From the classroom to the boardroom, groups and teams are prevalent in society today. Page and Donelan (2003) emphasize the necessity of professionals to have teamwork skills in order to function well in the business environment. In their annual analysis of the job market for college graduates, the National Association of Colleges and Employers (NACE) continues to find teamwork, leadership, and communication skills as prominent qualities desired by employers (NACE, 2010). Cassidy (2006) stresses the presumption that employers deem academic institutions responsible for preparing students in such skills needed for the workplace. By focusing leadership education, as well as other disciplines on the proper development of group work skills, a safe environment is offered for students to practice these social and communication skills while applying course concepts (Haberyan, 2007). Employability skills are interdisciplinary and relevant for any level of position desired; the acquisition of such skills if influenced in academia by many factors, including an instructor's personal characteristics and teaching methods, as well as student involvement (Cassidy, 2006). Hassanien (2007) noted that students are aware of the frequency group work is being utilized throughout higher education, and view it as a crucial component of their studies because teamwork is an "essential employability requirement" (p. 145). Astin and Astin (1999) articulate the role of Higher Education to shape and maintain a high standard of quality leadership in our society. Efforts of connection classroom and work experiences in college have led to a broad range of labels relating learning through group work (Baskin, et al., 2005). Kemp and Seagraves (1995) explored transferable skills –skills for the workplace and education - in five courses at Glasgow Caledonian University. Seventy percent of the students in this study indicated that they had gained a clear understanding of group work and process through the group experience and valued the process of group work as a means to confidence. Collaboration is needed in the organizational context, thus it is essential that students today receive the knowledge and skills needed for success in a rapidly changing, technology-driven society.

The College Classroom

Although traditional lecture may be suitable form of delivery for some disciplines and topics, students today demand variance in teaching methodology. Halpern (2000) emphasizes that the traditional lecture format of the college classroom is failing students by not creating a sustainable transfer of knowledge. Students are not challenged to think about material with the lecture and

recitation methodology, which results in students being physically in class but not mentally engaged (Cottell and Millis, 1993). Holter (1994) expresses the ineffectiveness of the lecture format, as the student is merely an observer in the learning process. In the past decade, researchers throughout the country have explored various teaching methodologies in an attempt to discover which method has the greatest impact on learning (Bobbitt, et al., 2000). Although differences arise in the discourse of methodology effectiveness, most scholars believe that lecture does not facilitate the creative and problem-solving skills students need to develop in their college careers (Rassuli & Manzer, 2005; Bobbitt, et al., 2000). Thus, the trend of teamwork in the classroom setting is evident through the demands of students, potential employers, and professors utilizing cooperative learning pedagogy (Colbeck, et al., 2000). Many academicians support cooperative learning pedagogy due to its impact on students to acquire the skills desired by employers (Rassuli & Manzer, 2005). Kent and Hasbrouck (2003) note the increasing popularity and use of such pedagogy techniques as team projects, group tests, and problem solving among others collaborative learning techniques. However, Riva and Korinek (2004) note that much of the literature on group work in the higher education classroom focuses on the when and how of incorporating the pedagogy into the classroom rather than the theory or connection of the experience to projects beyond the classroom.

Cooperative Learning

Linking educational goals with employability skills to narrow the potential gap for students in an increasingly technologically-driven generation is of great importance today. Hassanien (2007) noted that researchers have demonstrated the positive impacts of collaborative learning, including team work skill development, increased motivation and a more positive attitude, and creation of a diverse cultural understanding. Cooperative learning in the classroom setting has been extensively researched throughout the years. The premise of cooperative learning is for student learning to be more in depth and more interdependent than in the traditional classroom (Knabb, 2000). An important shift in responsibility of learning from the instructor to the student occurs in cooperative learning (Halpern, 2000; Cooper, et al., 1988). As an additional teaching methodology, or supplement to traditional methodologies, collaborative learning offers professors the opportunity to control certain aspects of the assignment while allowing for creative expression and execution of ideas within a group. This may be an application to team exercises, or a case study, but also allows for the team to learn to work together to determine logistics of the problem at hand and utilizes higher-order thinking skills (Holter, 1994). Group work or team assignments are just one strategy of cooperative learning that enables students to become actively engaged in their academic pursuits within that course and the community or organization focused on through the group project (Holter, 1994; Payne, et al., 2006). Payne and Monk-Turner (2006) describe the rising trend in the college classroom toward group projects, noting that the rise is connected to the increase in the general increase of use of cooperative learning in the collegiate classroom.

Student Perceptions of Group Work

This increase of opportunities for students to gain group work experience in the collegiate classroom with a lack of direction from instructors has led to frustration and a mix of student perceptions regarding the use of group work in the classroom. A common occurrence for

instructors utilizing group work in the classroom is to hear student complaints regarding a group project (Payne and Monk-Turner, 2006). Based on prior experiences, many students groan at the thought of another group project experience where one individual carries the weight of the work and the group struggles to find a common time to meet, which leads to frustration and friction among the group as well as lack of focus on the assignment (Butts, 2000). Although the benefits of collaborative learning are evident, Bolton (1999) notes that student satisfaction with group work experiences in the classroom is less than that of the faculty designers. This frustration with the enthusiasm portrayed by individuals within higher education to provide students with group work experiences is rooted in the lack of instructional support in the group development process to manage the materials and insights desired to be gained from the experience (Bolton, 1999). Mu and Gnyawali (2003) also emphasize the lack of guidance through the group development process or knowledge of how to effectively work together in a group with other students – a skill necessary to fulfill a complex team assignment. Despite this negative perception among some instructors and students, Coers and Lorensen (2009) found a generally positive perception of group work among students; however, the perception of group work became more positive when the group project was accompanied by group process knowledge.

Group Work Skill Development

Baskin, Barker, and Woods (2006) relate to the development of group work skills to other professional or technical skills – a skill “that needs to be developed and learned” (p. 20). Hirst, Mann, Bain, Pirola-Merlo, and Richver (2004) emphasize the disconnect between leadership learning and behavior, suggesting that experiential learning may enable students to develop group work skill in a timely manner focused on the process and long-term development of skills, rather than short training courses on the job. The importance of understanding the process of group development—a process that needs to be learned and developed over time—is evident in the shifting focus on group work within the university setting (Baskin, et al., 2005). Students should be aware of the stages of group development, and fully understand the depth of the group project at hand (Davis, 1993). Ultimately, students need training to be effective and successful at group work (Hassenien, 2007; McGraw and Tidwell, 2001). McKendall (2000) also notes that while students gained a wealth of experience in group work, no class or instruction was focused on effective group work for a simple lack of time on behalf of the instructor to even introduce the process of group development or tips for working in a group. Thus, student frustrations and mixed perceptions of utilizing group projects in the collegiate classroom will continue until some sort of course or training is developed for students and teachers alike.

Conceptual Framework

The Tuckman & Jensen (1977) model of group development provided the theoretical framework of this study. In 1965, Bruce W. Tuckman conducted an in-depth review of 50 articles relating to group development in various settings; distinction between interpersonal and task-related behavior was explored throughout this review. From Tuckman’s (1965) review, four stages of group development were identified: (a) forming, where group members orient with the task and interpersonal boundaries; (b) storming, marked by conflict around interpersonal issues and resistance to task requirements; (c) norming, distinguished by role adoption and cohesiveness; and (d) performing, which is established by the influence of built interpersonal relationships on

the task performance. Tuckman (1965) believed his model was congruent with common sense and developmental theory, and understood that “duration of group life would be expected to influence amount and rate of development” (p. 14). Fall and Wejnert (2005) noted that, “creating a unified, common language for the description and analysis of group dynamics contributed greatly to the understanding of group work” (p. 324-325). The forming-storming-norming-performing-adjourning model is appealing due to its rhyming stages for easy recall, the comfort of conflict viewed as a natural stage to the process of development and lead to norms in a group, and performance of the task.

Methodology

This study utilized a true experimental, posttest only control group design to determine the impact an emphasis on group development theory (Tuckman and Jensen, 1977) may or may not have on a student’s perceived importance and confidence in group work skills, and perception of group work in the classroom setting. The control group, consisting of 16 undergraduate students, received the group service project assignment, as well as a one-hour lecture on the process of group development identified by Tuckman and Jensen (1977). The experimental group of this study consisted of 17 undergraduate students. These students received the group service project assignment, a full class period (approximately 3 hours) lecture and application brief on the process of group development identified by Tuckman and Jensen (1977). In addition to the extended lecture time and application, experimental group students also completed a mid-semester reflection paper on the group development process. A purposive sample was utilized for student participant selection, as data was collected from two sections of an introductory, undergraduate leadership course held during the short, summer semesters.

The population of this study included 33 undergraduate students at (University) who were enrolled in the 2009 summer semester course entitled (Introduction to Leadership and Service). The control group included undergraduate students enrolled in the Maymester course (three weeks in length, daily meetings), and the experimental group included undergraduate students enrolled in the July semester of the course. A purposive sample was utilized for student participant selection, as data were collected from two sections of ALDR 3900 held during the short, summer semesters. This particular sample of participants was chosen due to the nature of the leadership course which included a groups and teams content area, as well as an established service-learning group work component.

The instrumentation utilized in this study was the *Core Group Work Skills Inventory – Importance and Confidence (CGWSI-IC)*. The Association of Specialists in Group Work (ASGW) developed training standards related to group work in 1983, and were revised in 1991, 2000, and 2007 (Wilson & Newmeyer, 2007). The instrument consists of 27 items, each matched to one of the ASGW training standards. Wilson & Newmeyer (2007) noted the scaling of the instrument, which includes a four-point summative scale rating for each dimension; the importance scale ranged from “very unimportant to very important” and the confidence scale ranged from “very unconfident to very confident” (Wilson & Newmeyer, 2007). A ‘before’ section was added for this study to create a post-then analysis of the importance and confidence factors of the survey, and constructs developed from the instrument’s 27 statements (See Table 1).

Measures & Scoring

Frequencies were calculated for the demographic data provided in the questionnaire, including gender, academic status, previous group work experience, previous classroom group experience, perception of group work in the college classroom (before and after this course), and group project involvement in courses. The demographic items relating to perception of group work in the college classroom were further analyzed to determine if a correlation exists between perception and confidence in group work.

In its original form, the *Core Group Work Skills Inventory – Importance and Confidence* instrument corresponds with training standards identified by the Association of Specialists in Group Work. The researcher added a before component to the instrument for both the importance and confidence scales, creating a post-then format for the survey. Although the context in which the instrument was designed for – group therapy – was not the context within the study, similarities in group work skills identified through the instrument are transferable to the context of classroom group work and the group development process. Thus, the researcher identified four constructs within the *Core Group Work Skills Inventory – Importance and Confidence*: group process, collaboration, group development, and leadership (identified in *Table 3.1*). The group process construct included five of the instrument’s statements (9, 13, 14, 19, 26), which focus on process and task orientation, as well as the functioning of the group. The collaboration construct also included five statements (8, 10, 11, 15, 17) from the instrument that honed in on cooperation among group members, encouragement of participation, and information exchange among a group’s members. A third construct was developed to emphasize group development through fit, feedback, and awareness of group members’ contributions, which included four of the instrument’s statements (5, 6, 7, 20). The fourth construct consisted of seven statements (1, 2, 4, 21, 22, 24, 25) that focused on leadership through best practices, organization, self-evaluation, and goal orientation. Five of the instrument’s original statements were disregarded for data analysis, as the statements did not pertain to the context of group work discussed in this study. The disregarded items included statements 3, 12, 16, 23, and 27, which addressed self-disclosure and disclosure of opinions or feelings in a group work setting.

Table 1

Core Group Work Skills Inventory – Importance and Confidence, Constructs

Construct and Corresponding Items

Group Process

- 9. Identifies group process
- 13. Responds empathically to group process themes
- 14. Keeps a group on task
- 19. Assesses group functioning
- 26. Contributes to evaluation activities during group processing

Collaboration

- 8. Works cooperatively with a co-leader
 - 10. Works collaboratively with group members
 - 11. Encourages participation of group members
-

15. Requests information from group members
17. Provides information to group members

Group Development

5. Seeks good fit between group plans and group member's life context
6. Gives feedback to group members
7. Requests feedback from group members
20. Identifies personal characteristics of individual members of the group

Leadership

1. Evidence ethical practice in group membership or leadership
2. Evidences best practices in group membership or leadership
4. Develops a plan for group leadership activities
21. Develops hypotheses about the behavior of group members
22. Develops overarching purpose and sets goals/objectives for the group, as well as methods for determining outcomes
24. Conducts evaluation of one's leadership style
25. Engages in self-evaluation of personally selected performance goals

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Findings & Implications

Demographic information for the student participants of this study describes the similarities between the control and experimental groups of the purposive sample chosen for this study. The participants of this study included 16 undergraduate students in the control group, with 11 males and 5 females. The control group contained a sophomore ($n=1$), juniors ($n=5$), and seniors ($n=10$). The experimental group was represented by 17 undergraduate students – 8 male and 9 female – with sophomores ($n=9$), juniors ($n=3$), seniors ($n=4$), and an additional student ($n=1$).

Participants reported previous group work experiences (external) according to four categories: *athletics, professional organizations, sororities, or fraternities, student organizations, or other* specified means. In the control group, 87.5% reported involvement in group work through athletics ($n=14$), 43.8% had experienced group work through a professional organization, sorority, or fraternity ($n=7$), 56.3% had experience in group work within a student organization ($n=9$), and 6.3% indicated previous group work experience through other means, specifically the participant's job ($n=1$). Regarding participants in the experimental group, 82.4% indicated involvement in group work through athletics ($n=14$), 35.3% had experienced group work through a professional organization, sorority, or fraternity ($n=6$), 41.2% had experience in group work within a student organization ($n=7$), and 5.9% indicated previous group work experience through other means, specifically the participant's church ($n=1$). Experience gained through external group work scenarios within student organizations, professional organizations, athletics, or other means provides additional avenues for engagement in collaborative work to enable further application of course material and develop skills applicable for employment (Astin and Astin, 2000).

Students also responded with the nature of any previous classroom group experience through courses in three categories: *course related to my major, general education course, or elective course*. In the control group, 56.3% designated courses related to their major ($n=9$),

37.5% indicated general education courses ($n=6$), and 75.0% reported elective courses as instances of previous group work experience in the classroom setting ($n=12$). Within the experimental group, 64.7% of participants indicated courses related to their major ($n=11$), 52.9% noted general education courses ($n=9$), and 88.2% identified elective courses ($n=15$) as experiences with group work in the classroom setting. The inclusion of group work experiences in courses throughout the university emphasizes the interdisciplinary relevance for group work and leadership skill development, and reiterates the notion that group activities offer one of the richest opportunities for transferable skill development in the college classroom (Astin and Astin, 2000).

Participants also indicated the number of group work projects completed in academic courses prior to this course, with options ranging from one to five and over. No participants in the control group reported having never taken a course that included group work, 6.3% of the participants indicated having two prior courses with group work ($n=1$), 6.3% had experienced three prior courses with group work ($n=1$), 31.3% reported four prior courses including group work ($n=5$), and 56.3% of the participants stated having five or more prior courses that included group work. Thus, the control group participated in over an average of 4.38 courses which required group work as a component of their curriculum. In the experimental group, no participants indicated having no prior courses that included group work, 5.9% reported having two prior courses with group work ($n=1$), 11.8% had experienced three prior courses with group work ($n=2$), 11.8% also reported four prior courses including group work ($n=2$), and 70.6% of the participants stated having five or more prior courses that included group work ($n=12$). The experimental group participated in over an average of 4.18 courses which required group work as a component of their curriculum. The frequency of group work being utilized in the collegiate classroom as reported by participants suggests alignment with the belief that group work is increasingly being used to meet growing demands of industry for leadership and group work skills in employees (Colbeck, et al., 2000; Siciliano, 2001; Hassanien, 2007).

Participants indicated enjoyment levels of group work in the classroom, which were reported according to four options: *never*, *seldom*, *sometimes*, or *always*. Concerning participants in the control group, 25.0% indicated seldom enjoyment of group work ($n=4$), 37.5% reported enjoyment of group work sometimes ($n=6$), and 37.5% indicated always enjoying group work experiences ($n=6$). For participants in the experimental group, 11.8% reported seldom enjoyment of group work ($n=2$), 58.8% indicated enjoyment of group work sometimes ($n=10$), and 29.4% noted always enjoying group work experiences ($n=5$). The variation in enjoyment levels of group work may be related to each student's previous experience with group work in the classroom in dealing with the common issues that plague groups, including social loafing, scheduling challenges, and personality differences among group members (Colbeck, et al., 2000; Pauli, et al., 2008; Levi, 2007).

Results of paired t-tests for developed constructs of the *Core Group Work Skills Inventory – Importance and Confidence*, with focus on the 'importance' scale of the instrument were reported. Participants rated themselves on items related to each construct on a summative rating scale from one to four (1=very unimportant, 2=unimportant, 3=important, and 4=very important). For the control group, a strong, significant improvement in participants' perceived importance from before the course to after the course was indicated in all constructs ($t > 2$). The importance of Group Process represented the strongest improvement ($t=4.096$) for the control

group, with Leadership ($t=4.081$), Group Development ($t=3.721$), and Collaboration ($t=3.294$) constructs following suit. For the experimental group, significant improvement in participants' perceived importance from before the course to after the course was indicated in all constructs ($t > 2$). The importance of Leadership represents the strongest improvement ($t=3.891$) for the experimental group, with Group Process ($t=3.396$), Group Development ($t=3.099$), and Collaboration ($t=2.537$) constructs following suit.

A comparative analysis of the growth in importance from before the course to after the course in each construct between the control and experimental groups was reported. Summated means for each construct and the corresponding standard deviation are based upon the participants' self-reported rating on items related to each construct on a summative importance rating scale from one to four (1=very unimportant, 2=unimportant, 3=important, and 4=very important). Reported means and standard deviations resulted from the calculated differences of before and after scores, summated for each construct identified by the researcher. Independent t -tests were conducted to determine the significance in change regarding perceived importance of group work skills. With $p > .05$ in all four constructs, equal variances were assumed. All four constructs indicate $t < 2$, which indicates no significant difference between the control and experimental groups.

The significant improvement in both the control and experimental groups of this study suggests the positive impact that pairing group development knowledge with group work in the classroom on students' understanding of the importance of group work skills. However, the comparative analysis indicates no significance in change between the control and experimental groups of this study. Colbeck, Campbell, and Bjorklund (2000) provided insight through their qualitative analysis of student experiences with group work, stressing that students may appreciate such skill development if faculty stress its importance and relevance to their future endeavors. This may imply that it is not the amount of emphasis placed on the group development process, but rather the inclusion of such knowledge that impacts a student's understanding of the importance of developing such skills for their future career.

The results of paired t -tests for developed constructs of the *Core Group Work Skills Inventory – Importance and Confidence*, with focus on the 'confidence' scale of the instrument were reported. Participants rated themselves on items related to each construct on a summative rating scale from one to four (1=very unconfident, 2=unconfident, 3=confident, and 4=very confident). For the control group, a strong, significant improvement in participants' perceived confidence in group work skills from before the course to after the course was indicated in all constructs ($t > 2$). The confidence scale for the Leadership construct represents the strongest improvement ($t=5.578$) for the control group, with the Group Process construct also indicating a significant improvement in confidence ($t=5.222$). Group Development ($t=4.200$) and Collaboration ($t=3.337$) constructs also demonstrated a significant improvement in participants' perceived confidence in those identified group work skills.

For the experimental group, significant improvement in participants' perceived confidence in group work skills from before the course to after the course was reported in all constructs ($t > 2$). The confidence scale for the Leadership construct represents the strongest improvement ($t=4.654$) for the control group, with the Group Process construct also indicating a significant improvement in confidence ($t=3.822$). Group Development ($t=3.453$) and

Collaboration ($t=3.225$) constructs also demonstrated a significant improvement in participants' perceived confidence in those identified group work skills.

A comparative analysis of the growth in confidence from before the course to after the course in each construct between the control and experimental groups was presented. Summated means for each construct and the corresponding standard deviation are based upon the participants' self-reported rating on items related to each construct on a summative importance rating scale from one to four (1=very unconfident, 2=unconfident, 3=confident, and 4=very confident). Reported means and standard deviations resulted from the calculated differences of before and after scores, summated for each construct identified by the researcher. Independent t -tests were conducted to determine the significance in change regarding perceived importance of group work skills. With $p >.05$ in all four constructs, equal variances were assumed. All four constructs indicate $t < 2$, which indicates no significant difference between the control and experimental groups.

The significant improvement in both the control and experimental groups of this study suggests the positive impact that pairing group development knowledge with group work in the classroom on students' confidence in group work skills. However, the comparative analysis indicates no significance in change between the control and experimental groups of this study. Effective instructor guidance for students participating in group projects can also improve confidence in performing the group work skills necessary to have an enjoyable group work experience (Colbeck, et al., 2000; Siciliano, 2001). Prior group work experiences, such as those gained through student involvement in organizations or athletics, may also increase a student's confidence in group work skills when instructor facilitation of cooperative learning lacks direction regarding the group development process (Colbeck, et al., 2000). This may imply that it is not the amount of emphasis placed on the group development process, but rather the inclusion of such knowledge that impacts a student's confidence in applying such skills and knowledge in group work scenarios.

The demographic question regarding participants' perception (positive or negative) of group work in the classroom setting before and after the course was reported. Within the control group, 31.2% of participants indicated a negative perception of group work prior to the course ($n=5$) and 68.8% of participants noted a positive perception of group work prior to the course ($n=11$). After the group work experience in this particular course (ALDR 3900: Introduction to Leadership and Service), 6.2% of the control group participants continued to have a negative perception of group work in the classroom ($n=1$). Thus, 93.8% of control group participants completed the course with a positive perception of group work in the classroom setting ($n=15$). For the experimental group, 5.9% of the participants indicated a negative perception of group work in the classroom ($n=1$). The other 94.1% of the participants in the experimental group indicated a positive perception of group work in the classroom setting prior to the course ($n=16$). Following the group work experience within this course, 100% of the experimental group participants indicated a positive perception of group work in the classroom setting ($n=17$). The results of this study indicate a positive improvement in perception of group work in the college classroom, as also indicated by Coers and Lorensen (2009). Student understanding of group development impacts the group experience; thus, ensuring faculty are aware of group development knowledge and including group development knowledge in the college classroom where group work is being utilized are imperative steps toward developing group work skills and

creating a positive student group work experience (Baskin, et al., 2005; Gillies, 2003; Butts, 2000; Coers and Lorensen, 2009).

Conclusions and Recommendations

There is an emergent trend towards utilizing teams and cooperative learning in the college classroom. This trend can be attributed to stimuli provided by prospective employers of students, students themselves, cooperative learning educators, and accrediting agencies (Colbeck, Campbell, & Bjorklund, 2000). The results of this study show it is important for students to understand there is a process of team development, and if this process is followed correctly, better perceptions of teamwork and better products are a result.

A large determination of team success and true cooperative learning lies with the instructor. The facilitation of teams by instructors is essential, but in many classes, team projects are assigned and the only guidance given by the instructor is “good luck”. “Regrettably, [instructors] have been less vigorous in [their] efforts to provide students with the concrete support and systematic guidance they need to effectively navigate their team-based assignments” (Bolton, 1999, p.233). Instructors “have been socialized to believe that [their] primary job is to teach content, and someone else should be responsible for the process” (Bolton, p.235). But, as teams and cooperative learning become more utilized as teaching techniques in the college classroom, the need for instructors to understand the intricacies of team learning increases. Because of this, the following recommendations are designed to offer insight to group work in the leadership education classroom and continue to provide experience for developing group work skills that will transfer to students’ careers:

- University educators choosing to utilize group work in the classroom setting should be trained on the group development process and include such instruction to their students prior to assigning group work projects.
- Given the different contexts of the original survey’s purpose, a survey relating specifically to components of the group development process and skills desired for employees should be developed and tested.
- Additional research should be conducted relating to various group work pedagogies.
- Research regarding the relationship between the amount of support and structure given to students by instructors for a group work assignment and a student’s perception, believed importance, and confidence in group work skills.
- Further research should be conducted to include courses that do not include group process knowledge with group work assignments to determine the full impact of group process knowledge inclusion regarding a student’s perception, believed importance and confidence in group work skills.
- Additional research should be conducted to explore the impact of technological innovations, such as wikis and other online collaboration tools, on the group work process.
- Research pertaining to the use of service-learning as a means to group work skill development to both benefit the student in transferable skill development, as well as the community being served through the project.

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