

TRUST NO ONE:
SATISFACTION AND SUCCESS IN ASSIGNED GROUP DYNAMICS

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Jessica Kornberg Wall

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SATISFACTION AND SUCCESS IN ASSIGNED GROUP DYNAMICS

Thesis Supervisor:

Natalie Ceballos, PhD
Department of Psychology

Approved:

Heather C. Galloway, Ph.D.
Dean, Honors College

Abstract

Without a comprehensive and concise guideline for the implementation of group project work in higher education, educators and students alike can dread the assignment of a group project. Educators are frequently required to assign group project work and many do not have workplace experiences to apply to their assignment structure. Without a comprehensive guideline, managing groups and inter-group conflicts can be time intensive on the part of both the educator and the student and the benefits of group project work may not be realized. To begin to bridge this gap, previous research has been applied to a current business group model to create guidelines for professors to implement group project work in a manner that will make group project work enjoyable and beneficial to the student while also preparing students for their future in the workplace.

Introduction

The business world is changing rapidly and while there are many guides for educators to successfully implement group work in a higher education classroom, many of these methods do not address the current business literature that is influencing the workplace and instead focus on accomplishing less specific goals. This research will examine the current peer-reviewed literature and will develop guidelines for educators in higher education to successfully implement group work in a beneficial manner. I will answer three research questions using the previous literature to better organize the strategy. The three research questions are:

- 1) What are the perceived benefits of group project work?
- 2) What are common problems/complaints seen in group project work?
- 3) What has prior research determined as effective ways to accomplish these goals?

Benefits of group work

A common rationale for assigning group projects in higher education is that learning how to function in a team dynamic and successfully complete a task will prepare students for the workplace (Sellitto 2010, Sellitto 2009, Bourner, et al. 2001, Sweeney 2008, Allen 2003). Working effectively in a group is a skill that employers seek in entry-level employees and the interpersonal skills developed as a result of group-work are also a big benefit. Egort states that “team work has also been identified as one of the core transferable skills valued by employers in the workplace” (2008). Working in teams or small groups is a fundamental aspect of most workplace environments and students will benefit from developing this skill with guidance and in a controlled environment.

Sellitto (2009) divided the benefits of group work into four general categories; holistic, individual, vocational, and collaborative. Holistic refers to the skills a student may acquire that could prepare him or her for their future. These benefits may lead to the development or refining of personality traits as well as social skills and behaviors.

Individual benefits are the skills a student gains that directly benefit their skills.

Examples would be improvements in time-management, decision making skills, conflict management, giving and receiving constructive criticism, and negotiation skills.

Vocational refers to the development of skills that will benefit a student in real-life situations in the workplace. Collaborative benefits are the benefits from learning to appreciate and utilize the different backgrounds, viewpoints and opinions of others in their team.

Sellitto (2010) goes on to discuss how the above benefits lead to more benefits for the student. They “tend to encourage team-orientated and collaborative practices that contribute to individual student ability, as well as promote respect and responsibility toward other team members. Clearly the areas in which the benefits of group work apply allow students to be:

- exposed to different viewpoints
- develop interpersonal skills
- potentially assist with improved decision-making
- establish an environment that prepares students for their entry into the commercial world”

These four categories each have a very large impact on the future of any given student.

To be successful in the workplace, a person must have developed these skills. A shortfall in interpersonal skills or organizational and time-management skills can have disastrous results for a person's career and future employment prospects. Therefore, it is vital that a student develop these skills in constructive and successful applications of group projects throughout their college education. Educators should be mindful of the importance in developing these skills for a student's future. While also developing life skills, engaging in group work can help in the personality development of a student. In Bourner et al.'s study, students reported learning new personality aspects about themselves such as the ability to lead and the ability to compromise. Developing personality traits that encourage good interpersonal skills is obviously beneficial for students and for those they interact with in the future.

Participation in group work not only encourages students to develop life skills but also engages students in 'deep' learning methods. Students who acquire knowledge using a deep learning method (as opposed to a surface learning method) retain the knowledge for longer and can apply it to future problems. In group work, some of the responsibility for learning is transferred from the teacher to the student, which makes the student an active learner instead of a passive learner. Active learning develops skills while passive learning teaches knowledge. Development of skills by active learning promotes retention of the skills learned as well as better retention and application of knowledge acquired during the active learning process (Bourner et al. 2001). Bourner et al. also goes on to show that group project work promotes student autonomy and time management skills.

In a 2003 study, Allen was able to show that well-implemented group project work gave students “ more opportunities to articulate their thinking”; allowed students to “exhibit deeper understanding and retention of concepts”; were able to “ welcome the ideas of others and can incorporate them into their own strategies”. They also learned effective communication and were able to “[justify] their position through shared objective facts rather than emotional persuasion” The learned how to work as a team and respect the differences of others, “particularly those relating to race and social position.” The above benefits were echoed in studies by Sweeney (2008), who believed that group projects should be a large part of a student's education; Bourner, et al. (2001), who described the benefits realized by the students in their own words; and Alden (2011), who noted the benefits of the group discussion within the project and the benefits students saw when working in a diverse group.

Problems with group-work

There are 2 main aspects of group work problems cited by researchers from students participating in group-work. The first is the problem of the free-riding, or passenger, student. The passenger is defined as someone who does not contribute their share to the work in a group project. The second common problem is that grading practices are generally regarded as unfair. This can be interrelated with the passenger problem but not in all instances. If a teacher relies on the students to accurately report their contribution, the passenger has the potential to skew the points in their favor, which can result in a higher mark for them and a lower mark for the other group members. The same principle applies if the teacher gives the entire group the same grade. The passenger student did not participate, yet receives the benefits of the other students' hard work. In a project without a passenger, there can still be conflict or unfairness regarding grading as student's contributions or abilities are not always equal. A less competent student can lower the grade of the group if a more competent student does not oversee that work while a more competent student can inflate the overall score of the group by doing most of the work.

Passenger student

In Bourner et al.'s (2001) study, the passenger student was the most negative aspect of group work for the majority of students. However, Bourner et al. noted that the previous model study by Garvin et al. (1995) did not have any complaints regarding passenger students. The differences between the two experiments likely contributed to this and I will discuss those implications in another section.

The difficulties and frustrations experienced as a result of a passenger student are well documented in the literature (Selitto 2010, Bournier et al. 2001, Garvin et al. 1995). The effect of the passenger student's absence is disruptive to the other members of the group and will have a negative impact on the benefits of the collaborative process. One problem resulting from the passenger student is time-management difficulties. One group member not pulling their equal share of the work in a project will result in many time-management difficulties for the other members. The workload of the participating students will be increased and this can have a negative impact on the quality of the work for the project or for the students' other courses. Additionally, many students will squander time and effort that the student could be using in more productive pursuits in attempts to include the passenger student. Another negative effect of the passenger student is the reduction of group morale. The participating students will be shouldering more work than what was intended for one student to complete and this can result in additional stress and frustration, particularly if the extra work impacts their other classes. The group members may become resentful of the extra work and of the potential of the passenger student to benefit from the group's efforts without contributing. This low morale can lead to discord between the remaining group members and can also impede the deep learning process and the acquisition of skills. The passenger student may also reduce the benefits of working in a multicultural group. Should the passenger student be of a different cultural background than the other group participants, this can inflate negative cultural stereotypes and negatively impact relations in the future.

The final problem with the passenger focuses on the resulting unfairness in the grading

process. It is reasonable to think that if a project intended for five students was completed with the efforts of only four that the standards of grading the project should be adjusted accordingly and that the passenger should not receive a grade that is comparable to the grades for the students who completed the work, however, this does not always happen. Many teachers assign the same grade for the entire group or employ a peer-and-self assessment strategy. Dishonesty on the part of the passenger student and/or a reluctance to condemn a fellow student to a poor grade can lead to skewed results from the peer-and-self assessment process.

Grading practices

Unfair grading practices can be exacerbated by but are not necessarily exclusive to the problem of the passenger student. Even without a passenger student, a grading method that is regarded as unfair can divert the focus of the students from the project at hand. The ultimate goal of any student in a college course is the grade and in many cases, long projects account for a significant portion of a student's grade. Lack of accountability and assessment methods were listed as negative aspects of group work in several previously cited studies.

Brown and Knight discuss group work assessment methods in their book *Assessing Learners in Higher Education*. These methods include:

- allocating an identical grade to all students in the group
- an overall number of points allocated to the group who then distributes the points amongst themselves

- determining grades from peer-and-self assessment scores
- peer-and-self ranking methods used to allocate available points for a final grade by the teacher

The book describes several pros and cons to each method and eventually determines that no particular method is superior to the others.

While there is research to support this conclusion, most of this research does not focus on the student perception of fairness and is unable to definitively show that the scores received accurately represent the actual work and ability put in by the students in the group. Assessing assignments is most effective when student ability and student effort are taken into account. Another way to phrase that is to say that a student's work should be graded in part against the student's own abilities and previous work and not only compared against the work of other students and the standards of the course.

Tu and Lu (2005) created a mathematical model for their experiment in ranking techniques and their tests showed that their ranking technique was very effective, both in the perception of fairness and in the actual accountability of group members. Their strategy, which I will discuss in a later section, makes honesty on the parts of students to be the most advantageous strategy, even for students who did not contribute or participate. Students who are not honest with this method of peer and self assessment will be caught in their dishonesty or their dishonesty will benefit another student.

Assigning the same overall grade to each group member is universally regarded as an

obsolete and unfair practice and there has been a large amount of recent study to find a balance between teacher expedience and fairness to the students. Another topic for debate is how does this aspect of group learning transfer to a workplace skill? In a typical office, the employees do not compete for their take home pay, they work hard to keep their job, receive good reviews and raises and to earn promotions. Is there a way to transfer this aspect of work life to a classroom scenario?

General Discussion and Application of Current Workplace Strategies

Over the course of my research, I came across many different guides and systems for the workplace that are in use today. The big question for me was whether I should apply this research to the ideas of several systems or should I choose just one. Ultimately, I decided to choose one system to apply to the current research. While some employers may pick and choose from several systems, it is more logical to choose one system to employ. The system would have rationale for each part of the system and these parts would work together in a cohesive unit. Additionally, using several systems to reference would be confusing for my audience as well as confusing for any potential employees.

I chose the Scrum system for several reasons. The first was that this system is very popular and is recommended by many business sources. Its prevalence is enough that using the ideas from the system are considered common knowledge. The Scrum system is particularly prevalent in the technology industry, but the practices can be applied to other industries as well. The ideals of Scrum are also in line with the conclusions I have reached from my research, which made it a very good fit. The final reason I chose Scrum is because it is readily accessible for anyone to use. The guidelines are available for free online in several formats in multiple languages.

The Scrum system outlines specific roles for each member of the group. The first role is the role of the Product Owner. The Product Owner determines what the result or product of the project will be and provides the resources they deem necessary to achieve that result. Team members may make requests or advise the Product Owner but the Product

Owner is ultimately accountable and therefore, is ultimately responsible for those decisions.

The next role is the Development Team. The Development Team is the group of people who accomplish the task. They determine how to use the time and resources given to them to accomplish their tasks. They determine the length of the sprint increments. Also central to the Development Team is the idea that a team member is a team member and there is no leader or special position within the team. While members may have specialties and different tasks to do, the team as a whole is responsible for the work of the team and there are no sub-teams. If one member is flagging, it is the responsibility of the team to resolve that problem.

The final role is the role of the Scrum Master. The Scrum Master's job is to understand the Scrum techniques and to ensure that the Development Team and the Product Owner are on task with the Scrum method. The official Scrum guide describes the Scrum Master role as a servant-leader role. They provide service to the other members of the Scrum Team and in doing so, they are an effective leader and manager for the Team.

The rest of the guide is devoted to time management strategies, which will be discussed in part in the next section. Scrum advocates breaking up large projects into smaller tasks to facilitate effective time-management. On a daily level, there is the daily Scrum, where the members of the Development Team touch base and make sure that they are all in line with the tasks that they discussed during the previous Daily Scrum and make plans for

work to be completed before the next daily Scrum. These meetings should last no more than 15 minutes. Central to Scrum is the use of what they term a sprint, which is defined as a period of time in which a team working on a project will give a report on the progress of the project and/or will provide the end product in small increments for use or testing. The sprint is marked at the beginning and end by a planning meeting, where the Development Team will produce their previous sprint result and plan their next sprint. They determine the result and the time period of each sprint at that meeting.

The Scrum method was created to be a simple and effective way for teams to work together to accomplish a larger goal. It can be used in homogenous teams or interdisciplinary teams and is flexible enough to be adapted to any situation.

Guideline 1: Reduce project time

In Bournier et al.'s 2001 study, she was attempting to duplicate the results seen in Garvin et al.'s 1995 study on group project work. In the Garvin study, the project duration was over two weeks and the passenger student problem was not evident. In Bournier, et al.'s study, the project spanned the length of a semester and the passenger student was not only prevalent but was considered the foremost problem by the participating students. Bournier, et al. suggested that the passenger student problem could be prevented by assigning group projects that did not encompass long stretches of time or that required assignments to be turned in over the course of the project. As it is not always possible or beneficial to exclusively assign small projects, an educator needs a strategy to implement during a longer project course.

This problem is addressed very effectively in the Scrum system by using the sprint. Per Scrum, the sprint should be less than a month and applying Bournier, et al.'s research, a good sprint length for students would be two to three weeks. So by requiring a group to produce a section of the project every two weeks, the passenger problem could be largely prevented and the students will learn to break a larger project into smaller sections which will have the added benefit of teaching them time-management skills in a way that they will retain. This will also acclimate them to being accountable for a project over the entire period they are given to complete it.

Another suggestion would be for educators to set aside regular class time for groups to meet and discuss their project. This would effectively break up the project into smaller

portions while also allowing the teacher to remind students of the progress that they should be making. For example, a professor assigns a group paper project to be completed over the course of the semester. Every three weeks, a portion of the paper is due. The week before the due dates, the professor allows 45 minutes of class time for the students to meet with their groups and discuss their progress and contributions. For a sophomore or freshman level course, the professor may provide suggestions for division of labor and tasks and for junior or senior level courses, the professor may take a step back and ask students to divide the work amongst themselves and submit their task divisions to the professor at the beginning and at the end of the project. By allowing class time for these group projects, a teacher is reinforcing the time-management skills that the students should be learning and is also providing both accountability and autonomy. In the workplace, employees are not expected to work on group projects exclusively outside of the workplace and are given time during the work day for working and meeting with their group members. By imitating this model, an educator not only further prepares students for the workplace but keeps a mid-project lull and the passenger student problem from making an appearance.

Guideline 2: Fair grading practices

Implementing a fair grading system is important to the success of a group project. The system must not only be fair in practice but must also be perceived as fair by the students. In the workplace, good group project work is rewarded in the long term with opportunities for promotions and raises. It is expected of an employee to work in a group and produce results and only exemplary work is rewarded above and beyond the

employee's salary and satisfactory review. So in addition to being actually and perceived as fair, a grading system should reflect the accomplishments of students who excel in their work while not necessarily punishing the students who completed their tasks in a satisfactory manner. This must all be accomplished by the professor and based on the feedback given by the students. It's a seemingly impossible task but a study in 2005 by Tu and Lu has possibly found the solution.

In this study, Tu and Lu created a system that encourages students to be honest in their assessment of their peers and of themselves. The system itself is also simple in practice. An educator needs only to require the students to rank themselves and their group in order of effort and quality. The educator then will disregard the ranking a student gives to themselves and only uses the rankings they give for the other group members. Using the combined rankings of the group members on their peers, a teacher can determine the ranking of the group. Since a self assigned rank is not relevant, it is in the student's best interest to be honest regarding the contribution of their group members. To further the strategy of honesty being the best policy, there are two rules in place. The first rule is that the professor will announce the grade of every member to the entire group. Each member knows their own grade and the grades of the other group members. The second rule is that students will be able to lodge a complaint regarding the grade of themselves or a group member. In the case of a complaint, the entire project will be investigated. Those who are caught lying will lose points from their grade and if no one is caught lying, the student who complained will lose points. Using a 3 student model, they created a payoff matrix to demonstrate how honesty is

truly the best policy. If Student A is truthful, then if Student B or Student C is not truthful, there is a small chance of a cost to Student A but a larger chance of the dishonesty not having an effect. However, if student A lies, then the dishonesty of Students B and C have a larger chance of cost to Student A's grade. Since being honest is best for Student A, the variable of A's honesty was removed from the payoff matrix and it is assumed that A will be honest. Since A is honest, student B and C have a new payoff matrix. Between B and C, if they both lie, there is a cost to each but if they are both truthful, there is no effect. If one lies and the other is truthful, the one who is truthful may benefit and the one who is dishonest will lose points. Thus, honesty in this grading schematic is truly the best policy.

By implementing this grading system, an educator can eliminate any grading issues with group project work. This system is easy to implement, enforces honesty and rewards students for their work. To emulate a workplace system, beginning the grading scale with a grade of B or B minus would be the equivalent of the employee earning their salary. A student who produced excellent work or demonstrated leadership in the group would receive additional points while a student who performed below the minimum standards would lose points. The grade scale could be adjusted depending on the overall challenge of the particular course.

Guideline 3: Assign a group leader

Another source of conflict and time wasting problems in a group project is the determination of the group leader. In the Scrum system, there are two leadership roles as

well as the Development Team (the group or team working on the project): the Product Owner and the Scrum Master. The role of Product Owner is filled easily by the educator but many groups are left to determine the group leader position on their own. In some groups, there can be more than one student who is predisposed to take a leadership position and in other groups, there may not be any students willing to take on that role. This leads to conflict in the case of too many leaders and disorganization in the case of no leaders. These problems take away from the focus and learning benefits of the group project while also not preparing students for typical workplace situations. For a group project in the workplace, there is nearly always one person designated as the group leader. That person reports to management and is ultimately responsible for the project. In the Scrum model, the Scrum Master has obligations to the team and to the owner to make sure that the project is running smoothly. So by assigning a student to be the group leader, the educator can fulfill their task of preparing students for the workplace by acclimating them to managing that dynamic. If the choice is arbitrary or random, the student who is leader will learn how to be (or how not to be) an effective leader and will learn lessons of accountability. The students who are not in leadership roles will learn how to work in that dynamic with someone who is not technically their superior. Students who are less inclined to leadership roles could discover that trait within them while students who are inclined to leadership can learn to be effective and improve their skills. On the other side of the coin, students will learn to appreciate and support a fellow who is appointed a leadership role and will learn how to work within their own assigned role. The group leader can be compensated with the opportunity to earn additional points on that project to further emulate the workplace model. In the workplace, an employee

who successfully leads group projects has many opportunities open to them in regards to raises and promotions.

Guideline 4: Open door communication

Group work is complex and is difficult to handle. An educator can only do so much before the students must intervene. As these projects are meant to teach students the group project dynamic in a relatively safe and consequence-free environment, an educator should encourage students to come to them soon and often, especially with interpersonal problems within the group. A passenger student may be inspired to work harder if a teacher tells that student that he or she knows that they are not participating. Conflicts can be defused if a teacher is alerted to the potential problem before it becomes an issue. If students are encouraged to come to their professor with problems and questions, the professor can dispense advice so that the student can handle the problem on their own. Without open lines of communication, students lose the valuable resource of their professor's knowledge and experience. Due to the demands of their other classwork and other projects, a student may forget that they can come to a professor with their problems. Reminding students often that a professor is happy to assist reinforces the lines of communication. Additionally, if a student is in the habit of seeking assistance from a superior, they will experience less interpersonal issues in the workplace, as they will be used to seeking advice or intervention and will contact their manager before something becomes a major issue.

Conclusion

Group project work is vital to the educational value students receive in college and is also important in preparations for a student's future in the workplace. Rather than eliminating the group project in the face of its major problems, utilizing the Scrum strategy and applying it to the group project will remove the problems and enhance the benefits of group project work. It can make group project work enjoyable and will acclimate students to working in that dynamic. Preparing students for the workplace is of utmost importance in higher education and successfully implementing group project work is a large step in that direction.

One question I had while writing this paper was how did the group project get so broken? How could educators fail so badly that there is literally a pop culture joke based on the hatred of the group project? My realization was that while there are many resources for an educator, there is no concise, widely accepted and readily available guideline for educators on the topic of group project work. There are many books and academic articles that discuss the benefits of group work but nothing consolidated into one resource. Educators seem to have been given the task of assigning group work with the rationale behind the assignment but no real guide for how to accomplish those goals. It is my hope that this paper is the beginning of a solid framework for such a guide.

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