

DISTINGUISHING BETWEEN HEALTHY AND DYSFUNCTIONAL STUDENT PROJECT

TEAMS:

AN ELUSIVE INSTRUCTOR CHALLENGE

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Submitted to the faculty of the University Graduate School

in partial fulfillment of the requirements for the degree

Doctor of Philosophy

in the School of Education,

Indiana University

August 2015

Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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June 26, 2015

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Acknowledgments

The completion of this dissertation study is due to the patient guidance provided by my committee, Dr. Timothy Baldwin, Dr. Barbara Bichelmeyer and Dr. Marty Siegel and, of course, my academic advisor and dissertation chair, Professor Elizabeth Boling. Additionally, I received valuable feedback from Ray Haynes. They, of course, built upon the foundation set by the faculty of Rochester Institute of Technology and Syracuse University and the former Option Six, Inc. The critical skills of my editor, Laura Chancey, deserve credit for the readability of this document.

Finally, none of this would have been possible without the unfailing support of my friends and family, including my grandparents, Larry and Bess Fyman, my mother, Shelley Fyman, my father, Martin Modell, my two sisters, Hillary Rubin and Jessica Peck and most especially, my wife, Misun, my daughter, Manhattan, and my son, Maverick.

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Distinguishing Between Healthy and Dysfunctional Student Project Teams:

An Elusive Instructor Challenge

While collaborative projects and student teams are widely praised for their potential contribution to student learning outcomes, they are often frustrating in practice for instructors. Students frequently complain of team dysfunctions and, faced with multiple teams working mostly outside class, instructors often find team observation and assessment to be ambiguous and problematic. As a result, those groups may not receive the support they need to successfully engage with and internalize the content. Complaints and reduced efficacy due to group dysfunction may push instructors to turn away from team projects, forfeiting their students' opportunity to benefit from the pedagogical value of collaborative learning. As professional life increasingly involves working in groups (Baldwin, Bedell, & Johnson, 1997; Davis & Miller, 1996; Hackman & Woolley, 2004; Stevens & Campion, 1999), this will render them underprepared for their future.

This study investigated the extent to which instructors are able to recognize and identify dysfunctional group behaviors and how they approach the task. In the first phase of the study, 75 instructors responded to weekly installments of one of 12 fictional narrative with diagnoses of the group's behavior. The narratives were designed to represent one of the following: (1) equal participation (2) social loafing or (3) group domination. While some instructors do require reflections from entire groups, many others do not and learn of group activity only when a student raises an issue. Phase two was similar to the first, but its 10 participants performed the task using a think-aloud protocol followed by questions regarding their professional experiences.

The 85 participants diagnosed their narrative's group as *equal participation* 75% of the time. While they tended to diagnose even dysfunctional groups as *equal participation*, when they did diagnose dysfunction, it was generally in line with the intended behavior. Instructors employed diagnostic strategies opportunistically and their agreement on their diagnoses at the weekly level was moderate. Future research is recommended to explore the effects of group dysfunction on learning and subsequent performance. Implications for the facilitation of student teams are discussed.

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Chapter 1 – Introduction

The week before final projects were to be submitted and presented, two of my students asked to speak with me for a moment after class. They explained that they were upset that one of their group members rarely attended out-of-class group meetings, did not complete her share of assignments and didn't contribute to the project overall. The students explained that it wasn't fair that this slacker should share a grade that was attributable primarily to their effort. I then had to explain that, although I believed they were telling the truth as they saw it, all I could do was caution them to speak up earlier the next time they found themselves in this position. After all, I didn't observe any of these problems myself and it was too late in the semester for any intervention on my part to have any effect. It was then I started researching dysfunctional group behaviors.

Group work has proven a popular student-centered instructional method (Baldwin et al., 1997; Cooper & Robinson, 1998; Gibbs, 1995; D. W. Johnson & Johnson, 1998; Paulus, Kohn, & Dzindolet, 2011; Richards, 2009) and it is therefore worthy of scholarly attention. Group projects enable instructors to assign more complex projects; they provide a support network (Baldwin et al., 1997), encouraging students to learn by teaching each other (Vygotsky, 1978); and, with a corresponding rise in the occurrence of groups in the workplace, they help create authentic experiences by preparing students for the group work they will face at the professional level (Baldwin et al., 1997; Davis & Miller, 1996; Hackman & Woolley, 2004; Stevens & Campion, 1999).

Among the potential barriers to success faced by those engaged in collaborative group projects are:

- One or more members not pulling their weight within the group – a situation known as “social loafing” or “free riding” (De Vita, 2001; Freeman, 1995; King & Behnke, 2005; Zhang, Johnston, & Kilic, 2008).
- One member may dominate the group’s operations and effectively prevent other members from contributing to the group’s progress (Cohn, Ohlsen, & Proff, 1960; Woolley, Chabris, Pentland, Hashmi, & Malone, 2010).
- A member may find themselves taking on a disproportionately large share of the workload (D. W. Johnson & Johnson, 1990).
- Personal conflict can lead to members feeling threatened and interfering with group performance (Badke-Schaub, Goldschmidt, & Meijer, 2010).
- Members may find themselves pigeon-holed into tasks for which they are already capable while others take on the tasks that challenge them – removing opportunities for practice and growth (Sheingold, Hawkins, & Char, 1984).
- Group members may agree to a course of action with which they do not agree to avoid conflict (Falchikov, 1995; Haynes, 2012).
- Collaborative skills must be developed through training and many of our students have not had this opportunity (Davis & Miller, 1996; Gardner & Korth, 1998; Goldfinch & Raeside, 1990).

One problem inherent in group projects is that of assessment (Bennett & Naumann, 2005; King & Behnke, 2005; Richards, 2009). Assessment is the act of determining merit, worth or value (Scriven, 1991); within the realm of education, this generally refers to assessing and assigning a grade to students’ performances. For the purposes of this study, the performance being assessed

is the group's process or the behaviors undertaken by a group's members as they work together to determine and achieve their goals.

Groups are difficult to study because they are complex entities comprised of interdependent individuals who are constantly changing. To complicate matters further, instructors cannot see everything that happens within a group unless all activity occurs under their direct observation. This approach is infeasible, so instructors have devised alternative methods to gain the information and insights they require. Some instructors will divide a project into sub-projects and assign individual group members responsibility for those specific sub-projects. In a variation on this method, others use group projects primarily for demonstration, while grades on individual assignments carry the greatest weight (King & Behnke, 2005). Other methods involve asking students to maintain and submit reflective journals (Elgort, Smith, & Toland, 2008; Williams & Wessel, 2004) or a reflection paper indicating the group members' contributions to a single group product (Fellenz, 2006), participate in a reflective discussion (Edmunds & Brown, 2010) or, submit a more formal rating of their peers' contributions either in absolute terms or in comparison to teammates (e.g., allocation of a finite number of points). Still other group projects are structured to allow members to dismiss members perceived to be poor performers (King & Behnke, 2005).

One method of assessing group work involves collecting comparative self- and peer-assessment or SAPA information from each group member weekly throughout the course of a group project (Tucker & Reynolds, 2006; Willey & Gardner, 2008). The resultant data is used to calculate a value representing an individual's contribution to the group effort. In this configuration, the assessments are comparative because they rely upon the allocation of a finite number of points amongst participants, rather than rating members in absolute terms.

Implementation of the regular comparative SAPA data collection method has met with positive responses in several studies from both the instructors and students involved (Fermelis, Tucker, & Palmer, 2007; Goldfinch & Raeside, 1990; Willey & Gardner, 2009). Studies have indicated that participating students accept the final, summative grades as an outgrowth of the SAPA data. In addition, it has been suggested that this data, collected as it is throughout the semester, might be employed for the purposes of formative assessment (Freeman & McKenzie, 2002; Willey & Freeman, 2006).

However, while many implementations exist, no set of dimensions or SAPA instrument has been validated for use in measuring group process. Furthermore, little guidance exists for instructors employing this method to use in interpreting the data they collect.

I sought to further develop this method by developing fictional reflective journal entries representing equal participation, social loafing and group domination groups, validating them with instructors experienced in group work, and then asking students to respond to them using the SAPA instrument. However, the responses of the experienced instructors indicated neither validation nor invalidation. While those who did identify a dysfunction overwhelmingly agreed with the designed intent of the author, the vast majority of respondents diagnosed groups as healthy. This result indicates that there exist significant barriers to their ability to diagnose these forms of group dysfunction.

With this study, I investigated how instructors respond when asked to diagnose group dysfunction. I uncovered some factors that contribute to an instructor's diagnosis and how these factors influence the diagnoses when faced with fictional equal participation, social loafing or group domination scenarios. Furthermore, I found that instructors opportunistically employ a

broad array of strategies in making their determinations and the results are, at best, moderately consistent across instructors.

The results of this study shed light on how instructors diagnose group dysfunction. This data can be used to facilitate the development of methods, tools and training to support instructors using long-term collaborative learning group projects.

Chapter 2 – Review of the Literature

What is Collaborative Learning?

I am interested in individuals working together to achieve a shared goal within a learning context. Two common approaches are cooperative learning, in which students work together following a prescriptive set of processes, and collaborative learning, in which group members negotiate with one another to determine a shared path to their goals (Bruffee, 1995; Dillenbourg, 1999; Matthews, Cooper, Davidson, & Hawkes, 1995; Panitz, 1999). Cooperative learning methods lend themselves more readily to student accountability than do those of collaborative learning and they cooperative methods are recommended for children while collaborative learning is more common with adolescents and adults (Bruffee, 1995). The literature, however, does not consistently draw a distinction between the terms. I will match the terminology of the literature where applicable, but prefer the term *collaboration*.

Additionally, I use the term *group*, rather than *team*, because the groups I am interested in do not exhibit the complementary skills and mutual accountability requirements of teams (Katzenbach & Smith, 2005). Instead, they are assumed to exhibit the same set of necessary skills (as evidenced by having met any prerequisites for the course and their motivation to take the course) colored by different perspectives and life experiences. Furthermore, in these formal learning contexts, students are expected to feel accountable to the instructor, but may or may not feel accountable to the other members of their group—this is a key motivator behind this effort.

Within this text, I refer to the assigned group tasks, or the instructors' implementations of collaborative learning, as *group work* or *collaborative group work*.

History of group work in learning. Group work has proven a popular student-centered instructional method (Baldwin et al., 1997; Cooper & Robinson, 1998; Gibbs, 1995; D. W. Johnson & Johnson, 1998; Paulus et al., 2011; Richards, 2009). The uses of group work in education in the U.S. and early theory around its use can be traced back to the work of John Dewey and his focus on the process of learning as opposed to the content (Schmuck & Schmuck, 1975). He believed that for a student to have the best chance to be successful in a democratic society, they must first experience life in a democracy — in this case, the classroom.

While Dewey proposed a philosophy supporting the use of group work in learning, a rise in empirical studies into group processes in general can be traced to Kurt Lewin (Schmuck & Schmuck, 1975), who founded the Research Center for Group Dynamics at Massachusetts Institute of Technology in 1945 (Lewin, 1945). This coincided with the increase in the influence of Soviet psychology when the suppression of Lev Vygotsky's work ended in the late 1950s and early 1960s (John-Steiner & Mahn, 1996). There has since been much research on group work and group process, as evidenced by the present literature review.

Theoretical constructs. Scholars have set forth numerous perspectives for understanding how groups function. Prominent theories include behaviorism, social constructivism, and the social interdependence theory. Each offers its own perspective.

Behavioral theory. Behaviorism focuses on reward structures and reinforcement for the individual and the decisions the individual makes in the face of these (Homans, 1986). Homans (1958) looked at social behaviors from the perspective of economics as actions in exchange for rewarding responses. Social interactions are one of the rewards often used in the form of praise

or relief from a period of isolation (Wodtke & Brown, 1967). Additionally, groups can offer models for observational learning and imitation of efforts.

Social constructivism. Vygotsky's social constructivist theories propose that through interactions with others, students build on their current knowledge and extend it into new knowledge (Vygotsky, 1978). Vygotsky posited that a student working with a more capable other is able to achieve more than he or she is able to do alone. This gap between the ability measured alone and when working with another is called the Zone of Proximal Development; it is when a student works within that zone that learning occurs.

Social interdependence theory. Social interdependence theory stems from the work of Kurt Koffka as refined by Kurt Lewin was subsequently formalized by Morton Deutsch (Deutsch, 1949) and examined by Johnson and Johnson (1989). It proposes that an individual's actions may be cooperative (where it benefits others), competitive (where it hinders the success of others) or unrelated (where there is no perceived effect on others), as the individual works toward common goals (D. W. Johnson & Johnson, 1998).

Benefits. Many benefits have been ascribed to collaborative work. By assigning a group project, an instructor effectively reduces the number of projects that must be graded (Hartley & Bostock, 2003; Parsons & Kasabova, 2002; Young & Henquinet, 2000). This also offers important benefits to the student, since the instructor is not as rushed or fatigued and this can result in better feedback. This potential benefit is particularly enticing in light of shrinking budgets and growing student bodies creating increased pressure to achieve more with fewer resources (Freeman, 1995; Tucker & Reynolds, 2006; Tucker & Rollo, 2005).

This section will examine the literature describing the benefits to students.

Ability to work well with others. Students engaging in group work exhibit positive changes in attitude and friendships among students from different backgrounds (Bercovitz & Feldman, 2011; Slavin, 1990a). They are also afforded opportunities to practice, and receive feedback on, their ability to cooperate with others.

Group members work together to fill in gaps in a member's understanding, and vet multiple possible approaches proposed by group members (Badke-Schaub et al., 2010; Baldwin et al., 1997; Barron, 2003). Furthermore, this serves a social networking function as the students one works with in class often form relationships that last far beyond the classroom (Baldwin et al., 1997).

In their seminal work on the role of conflict and controversy in the learning process, Johnson & Johnson (1979) discuss how controversy promotes—and is possibly even necessary for—learning (R. T. Johnson & Johnson, 1994). Conceptual disagreements cause students to feel uncertain and this increases their problem-solving skills, by increasing the accuracy of their ability to consider alternative perspectives.

Greater ability to problem-solve. Group projects provide students with the manpower to tackle larger, more complex and more realistic problems than those an individual can be expected to complete working alone (Goldfinch & Raeside, 1990).

Both receipt and provision of help or teaching one's peers can benefit those engaged in group projects (Blumenfeld, Marx, Soloway, & Krajcik, 1996; Oakley, Felder, Brent, & Elhadj, 2004; Paulus et al., 2011; Webb & Palincsar, 1996; Yager, Johnson, & Johnson, 1985). For help to be effective, it must be elaborated, or fully explained; this provides thorough explanations for the

recipient while causing the provider to think through his or her understanding. Furthermore, for help-seekers to reap the greatest benefit, the offer must be timely.

This can benefit instructors by reducing the repetition in their workload (both in grading and in reviewing the same content numerous times) and freeing instructors to address more complex and challenging issues (Goldfinch & Raeside, 1990; Tucker & Reynolds, 2006; Young & Henquinet, 2000). Removing the instructor as an ever-present source of truth can also result in increased reflection, exploration of ideas and critique of and by peers (Boud, Cohen, & Sampson, 1999).

A study observing thirty students, working in dyads toward a computer-programming task (Webb, Ender, & Lewis, 1986), found that, while students who asked questions of the instructor tended to complete the task successfully, the correlation with understanding the task was low. On the other hand, students who asked questions of each other and completed the task better understood the content, as demonstrated by their ability to subsequently interpret a program. All verbal interactions correlated positively with learning, and this was largely because verbal interactions that have a negative effect, questions without responses (Barron, 2003), were nearly non-existent. This indicates that conversing with peers about the task aids in understanding.

Real-world application. Another benefit for the student is that use of group work and group projects in the classroom helps to provide an authentic context, since the job market and modern-day workplace is moving increasingly toward teamwork (Baldwin et al., 1997; Baldwin, Bommer, & Rubin, 2012; Davis & Miller, 1996; Goldfinch & Raeside, 1990; Hackman & Woolley, 2004; Magjuka & Baldwin, 2006). Small group projects in the classroom provide increasingly authentic representations of what students are likely to see when they graduate.

Some recent successes and gains in productivity are claimed to be the result of a trend toward group problem-solving instead of a top-down, rigid management style. This has resulted in an increase in group work in business education programs (Baldwin et al., 1997; Blumenfeld et al., 1996; Boud, Cohen, & Sampson, 2001; De Vita, 2001; Gardner & Korth, 1998; McEnery & Blanchard, 1999; Paulus et al., 2011). We also see group work in the field of medicine (Edmunds & Brown, 2010; Warne & McAndrew, 2011) and the U.S. Army's Special Forces soldiers operate in cooperative teams (J. E. Brooks & Zazanis, 1997; Carpenter, Wisecarver, Deagle, & Mendini, 2005; White et al., 2005; Zazanis & Lappin, 1998).

Student satisfaction and self-efficacy. Students engaging in group work tend to feel liked and accepted by their peers (Webb & Palincsar, 1996). Group work participants perceive greater control over their own success. They also are willing to take on difficult tasks and will see those tasks through to completion (Cooper & Robinson, 1998; Haynes, 2012; D. W. Johnson & Johnson, 1998). This may be a positive perspective on the phenomena of groupthink (Haynes, 2012), which will be discussed later in this paper.

In a study of group work, it was found that students who worked in groups were more likely to perceive meeting learning objectives than those working individually (Oakley, Hanna, Kuzmyn, & Felder, 2007). The variability of this perception between group members was explained by student satisfaction with the experience, instructor guidance, "social loafers" (see [Social loafing](#)) and group size, all of which affect the experience. There were also strong indications that instructor support for students and of group process is a key element of successful group work. This means that when the group work ran smoothly and was supported sufficiently by the instructor, that students were more confident that they'd met the goals of the instruction.

Furthermore, Sharan (1990) points out that, in contrast with traditional, teacher-centered instruction, collaborative learning can offer an active role for all students. It also offers some relief from the boredom of a single delivery style.

Academic performance. Students who are taught within effective small groups perform better on achievement tests, retain information longer and exhibit higher levels of motivation (D. W. Johnson, Johnson, Stanne, & Garibaldi, 1990; Oakley et al., 2004; Peterson & Miller, 2004). Studies have also shown higher-level reasoning and critical thinking (D. W. Johnson & Johnson, 1998; Slavin, 1990b).

Factors affecting group work. Careful consideration must go into the design of a group project if it is to be successful. Spitzberg & Hurt (1987) attempted to capture the specific behaviors that led to interpersonal success in learning contexts both in and out of groups. The study reviewed twenty-five observable behaviors including things like eye contact, use of humor and rate of speech. The study concluded that, while these behaviors may contribute to success, their presence alone does not predict it—interpersonal success is complex. As such, scholars have investigated many factors that contribute to how a group operates and its ultimate success or failure.

Establishing common understandings. Scholars of group work do seem to agree that the ability to work effectively as part of a group is a learned skill. Instructors should provide their students with training on how to work effectively as part of a group, as well as ongoing support (Benne & Sheats, 1948; Blumenfeld et al., 1996; Goldfinch & Raeside, 1990; Sharan, 1990), and ensure that the group's purpose is clear (Haynes, 2012).

Benne & Sheats (1948) experimented with training to raise awareness of the functional roles which play a part in group operation (see [Group roles](#)). Their goal was to raise awareness of the roles and how they contribute to the successful operation of groups as they engage with certain types of tasks. The further hope was that of making it clear that these roles were distinct from group members' personalities so as to enable them to diagnose and deliberately enact the roles needed at any given time.

Gardner and Korth (1998) argue, based upon their study of 178 working adult graduate students over a four-year period, that successfully learning to work in groups can be represented as the product of motivation, attitudes toward group work, learning preferences, understanding and valuing others' learning preferences, and the educational activities. They suggest that academic courses aimed at helping students learn to work together effectively should include content to help students understand how individuals work in groups and contribute to group processes.

Another approach, which can function beneficially in conjunction with training, is for groups to establish a written set of expectations and policies at the outset of a group project (Oakley et al., 2004). Doing so before problems arise sets a clear course of action to resolve or escalate them.

Social sensitivity. Researchers have searched for a group analog of individual intelligence and identified what they call a *c factor* reflecting a group's ability to tackle a wide array of tasks (Woolley et al., 2010). Investigation of this factor showed that while it correlated moderately with the group's average intelligence and the highest scoring group member, it was most highly correlated with members' average social sensitivity – specifically, how well they were able to gauge the feelings of others in their eyes alone. It also correlated with the degree to which

conversation was shared among group members (i.e., did students take turns speaking or did one student dominate?).

Accountability. Slavin and Tanner (1979) report on an experimental study of the effects of individual accountability on learning and productivity of group members undertaken to explore the belief that a combination of individual accountability and cooperative rewards are factors that facilitate successful group work. The study clearly showed that those who carried out the task in groups, rather than individually, performed better. However, it should be noted that the task in the situation was brief in duration and the groups consisted of dyads only. This structure limited the potential for performance discrepancies.

Group goals and individual accountability continue to be recommended (Davis & Miller, 1996; Kennedy & Nilson, 2008; Slavin, 1988, 1990b); Oakley et al. (2004) recommend the use of a peer rating system to assess individual performance and adjust grades accordingly. However, it should be noted that there have also been indications that individual accountability may not be necessary at the college level (Slavin, 1990b).

Group composition. Scholars have investigated the many attributes of a group's composition to determine which ones have an impact on the group's performance.

Native culture. Nuntrakune and Park (2011) investigated possible barriers to successfully achieving cooperative learning in a Thai classroom, testing the hypothesis that cultural issues contributed to difficulties experienced by both students and instructors. This was not supported; students who had been raised in Thai culture were not prevented from working effectively in groups. Researchers instead determined that teacher training / familiarity with the technique was

of the greatest importance. The results suggest that people from any culture can learn to work together effectively if supported properly by teachers.

Diversity. Hoffman (1959) found that groups that were heterogeneous from the perspective of personality performed better than homogenous ones. The heterogeneous groups' solutions were more inventive. De Vita (2001) drew upon literature, as well as the experience of teaching an undergraduate international management course, to support recommendations for designing group work. In addition to cautioning that one must carefully consider the design of group work situations, he promoted the leveraging of cultural diversity to stimulate lively discussions amongst group members.

One study (Bercovitz & Feldman, 2011) looked at university invention disclosure reports to draw relationships between group composition characteristics and likelihood of creative innovation. They found that novel combinations of subject matter experts tended to yield successful innovations. Crossing organizational boundaries also improved the situation, as it brings in both new scientific and market knowledge. Additionally, the level of perceived inclusion in the group tended to increase the chances of success, in spite of cultural differences.

Different values. Neale, Northcraft and Jehn (2008) surveyed 545 professionals who worked in groups or teams and examined the relationships between different group member characteristics and group performance. They found that diversity of values had the greatest negative impact. They explain that it is non-trivial to ascertain such values. Interestingly, social group membership had little effect independently. Haynes (2012) also pointed to differing values as a significant source of conflict and adds the subtly different aspect of differences in priorities.

Differing values and/or priorities make it difficult for group members to work effectively together.

Social status. To examine the effects of social status, Dembo and McAuliffe (1987) looked at the effects of perceived (partially induced) status of eighty white, male sixth graders on their small group communications behaviors. They found that status affected actions within the group (e.g., offering and seeking help); high-status individuals dominated group interactions and were often perceived as leaders. As a result, low status students had less access to the help resources inherent in group work. Therefore, mixing high and low status individuals within a group can cause the low status individuals to suffer from inattention.

Gender. One study that examined gender differences in group work (Webb, 1984) indicated that groups with mixed gender can express complicated dynamics. This is a result of assumptions of ability and gender-based social status. In this study, seventy-seven seventh- and eighth-grade math students were tape-recorded; the researchers analyzed verbal interactions, as well as achievement using a pre- and post-test. Evenly split groups found males and females effecting comparable achievement. In female-majority groups, interactions were directed toward males—female achievement was lower relative to the males. In male-majority groups, females tended to be ignored and exhibited lower achievement. Webb also noted that females were more responsive to requests for help than their male counterparts. This is supported by a later study that found female confederates embedded in groups and trained to express dominance behaviors had a more difficult time doing so to the same extent that males expressed them (Ridgeway & Diekema, 1989).

In response to an earlier study, Layton and Ohland (Layton & Ohland, 2001) found that they were able to mitigate the effects of race on peer assessment by directing participants to focus on group work and not perceived student ability. However, they also reported this treatment resulting in increased effects related to gender. Specifically, women rated other women much lower than they rated men. The authors note, however, that the context was a course on engineering and gender biases are experienced in engineering.

When investigating group intelligence (c factor), it was found that this factor correlated with the number of females in the group (Woolley et al., 2010). The authors believe this is mediated by social sensitivity since women tend to score better on social sensitivity than men.

Group size. Wheelan (2009) found that groups with between three and six members provided the highest likelihood of reaching the highest stages of group development and lower rates of dissatisfaction. Oakley et al. (2004) recommended three- to four-person groups. Richards (2009) suggested that a fifth group member could help to complete others' work when unforeseen events occur. However, Richards found no indications of productivity improvement by five rather than four members and it should be noted that every increase in group size makes it more difficult to schedule meetings outside of class.

Durability. Johnson and Johnson (1998) classified groups as either informal cooperative, formal cooperative or cooperative base. Informal groups are temporary, lasting anywhere from a few minutes to an entire class period. Formal groups may last up to several weeks to satisfy complex course requirements. Cooperative base groups span entire semesters or a full year. The stable membership offers members the opportunity to build stronger relationships and give and receive more generic support and assistance that may not be specific to an individual class.

Johnson and Johnson explained that it takes time for a group to coalesce; therefore, complex interdependence mechanisms (e.g., involved group decision-making procedures) will cause group members to take longer before reaching their maximum levels of productivity.

Group selection. Oakley et al. (2004) found that, when allowed to self-select, stronger students gravitate to one another, leaving the rest to muddle through together. They recommended instructor-formed groups to combat this problem. These groups should include diversity both in ability and culture, taking particular care to include at-risk and minority students. Such diversity benefits the group by providing alternative perspectives, and the individual by offering an opportunity to be understood and accepted by peers.

Nicholson (2002) investigated student satisfaction with nine different methods of student assignment in groups including random or quasi-random assignment, forms of instructor-controlled and student-controlled methods as well as gaming or bidding methods. The 132 undergraduate participants responded to a survey of their past experience with the above methods of distribution. Random and proximity-based methods were reviewed negatively while the two bid-based processes (offering students some input into group composition) were reviewed positively. Furthermore, those experiencing the bid process reported getting along well with group mates. However, the sample included less than thirty students having experienced such a bid process. No attention was paid to impact on group task performance.

The method of group composition played a role in creative outcomes in design courses at Deakin University. Tucker (2005) found that when students self-organized, the low amount of conflict was accompanied by relatively mundane solutions, while in fully engineered groups (i.e., when instructors determine group membership), students often experienced high levels of destructive

conflict. Furthermore, they found that students preferred self-selection, but the resultant designs were lackluster. The best results were obtained when students were allowed to choose their group members while meeting constraints designed to increase diversity based on personality test results (Tucker & Reynolds, 2006). The method offered students some choice while resulting in improved designs and high levels of student satisfaction.

Sahin (2011) developed an algorithmic, preference-based method of assigning students to project groups and investigated the groups' subsequent performance. The proposed method was tested against random-, teacher- and student-selection methods using 327 software engineering students, and it was determined to render better performance.

Group roles. Many hold the view that members play distinct roles in a group, and they use this construct to discuss and understand group behaviors. Benne and Sheats (1948), in their work with the First National Training Laboratory in Group Development, categorized and described twenty-seven different functional roles played by group members. These roles are categorized as either group task roles, group building and maintenance roles, or individual roles. The authors discuss how different roles are required by groups at different stages of task performance and that the roles are not dictated by member personality. This seminal article is oft cited in materials that relate to leadership and the training of groups (Benne & Sheats, 2007). Researchers, however, do not agree on whether these roles are malleable—can members fulfill multiple roles simultaneously or change their role(s) over time (Webb, 1989)? Some success has been achieved in recognizing these roles (Chang, Chen, & Wang, 2011; Dong, Lepri, Pianesi, & Pentland, 2013).

Group processing. Johnson et al. (1990) looked at the effects of group processing on forty-nine high school graduates. Formal group processing involves the students in a session, during which they collaboratively reflect upon the positive and negative activities from the preceding period, in an effort to improve their performance in the future. Their study found that small group processing increased both individual achievement and group activity, as compared with both no group processing and large group processing. The recommendation in favor of group processing was echoed by Davis and Miller (1996).

Stages or phases of group development. Bales and Strodtbeck (1951) studied the process groups use to solve problems and found that groups tended to begin with a focus on orientation, moving on to evaluation, and then control. Tuckman built upon this in his seminal work on the stages of development in small groups (Tuckman, 1965), which remains the foundation for understanding group development today. In his comprehensive review of the literature on group work, he distilled four stages of group development, each exhibiting both group structure aspects and task behavior aspects. The four stages are often labeled: Forming, storming, norming and performing (see Table 1). While presented sequentially, they do not represent a rigid or consistent progression; there is no guarantee that a group will ever reach the performing stage or that, having reached one stage, they will not fall back to an earlier one (Edmunds & Brown, 2010).

Table 1
Tuckman's Model of Group Formation with 1977 additions

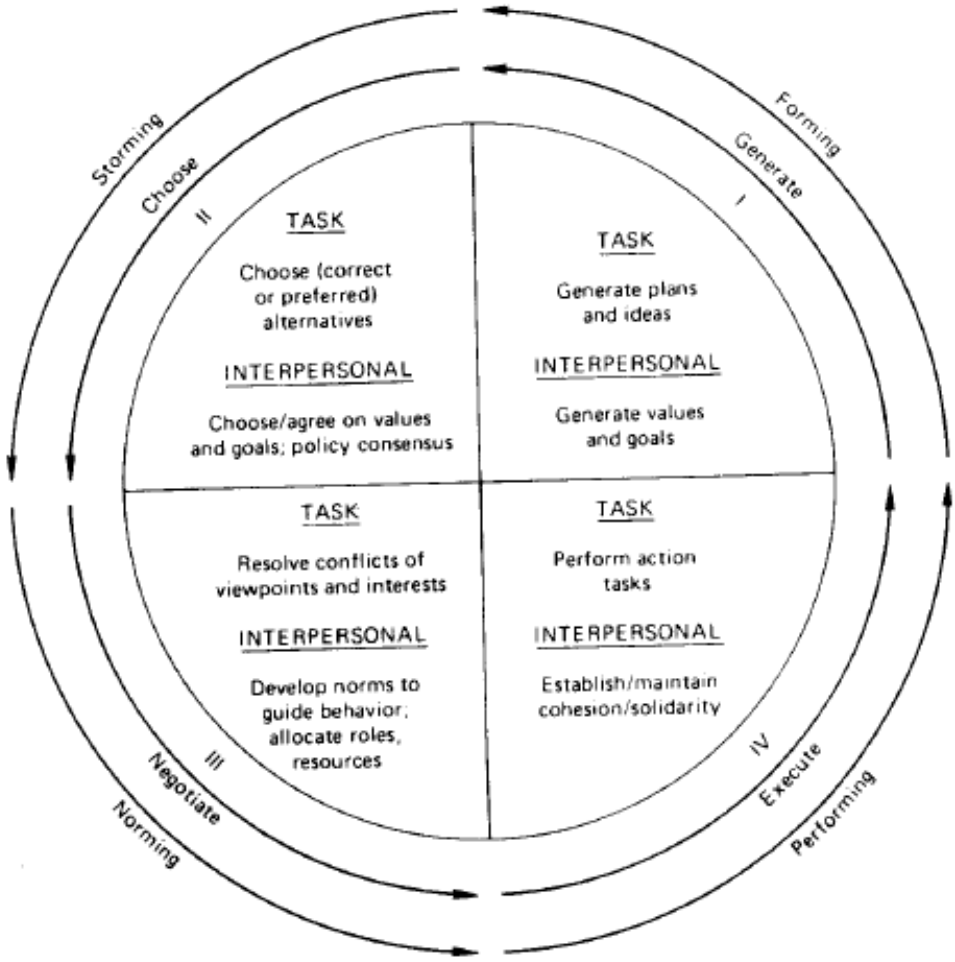
Stage	Group Structure	Task Behavior
Forming	Testing and dependence	Orientation and testing
Storming	Intragroup conflict	Emotional response to task demands
Norming	Development of group cohesion	Discussing oneself and other group members
Performing	Functional role-relatedness	Emergence of insight
*Adjourning	Disengagement	Recognition and reflection

*indicates 1977 addition

A decade later, Tuckman and Jensen (Tuckman & Jensen, 1977) revisited this conceptual model of group development and found that, while the empirical studies in the interim generally supported the model, few had been performed. However, there was enough to justify the addition of a final phase: adjourning. In this final phase, group members recognize one another, reflect upon their performance and prepare to move on to new group assignments.

However, Seeger (1983) cast doubt upon the phase theories of group development after performing a re-analysis of the data. His interpretation offered a viable alternative supported by observations in practice. He warned that accepting the notion that “small groups *naturally* adopt phased sequential approaches” (Seeger, 1983, p. 688 emphasis in original) because such a disposition discourages further research.

McGrath (1984) compiled a typology of activities performed within a group. The four major task types were: generate, choose, negotiate and execute. Each of these subdivided into either primarily task or interpersonal activities. McGrath then mapped these tasks onto a circle and integrated it with Tuckman's model of group formation (see Figure 1).



Davis and

Figure 1. Group task circumplex integrating Tuckman's Model of Group Formation¹.

Miller (1996) proposed a model for group projects to be used in education to support the learning of group work skills. The model described stages of group development: Orientation, formation, cohesion, performance, evaluation and finally dissolution. The model indicated that the instructor can exert significant influence on orientation, formation, evaluation and dissolution, but not

¹ MCGRATH, J. E., GROUPS: INTERACTION AND PERFORMANCE, 1st, ©1984, p. 61.

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cohesion or performance. It bears noting that the stages in this model track closely with Tuckman and Jensen's model (1977).

While Tuckman's model was derived from studies of development in therapy groups, Tuckman showed how the theory might be applied to training and laboratory groups (Hare, 1973/2009). It has since been extended and validated (Wheelan, 2009) and it is still often cited as the model of group development (Adams & Anantamula, 2010).

Tuckman's model is not universally accepted. Arrow, McGrath and Berdahl (2000) offered an alternative set of phases in their discussion of the complexity of groups. They explain that groups go through formation, operation and metamorphosis as their variables continue to change throughout the life of the group. They explained that "[g]roups must balance individuals' needs for affiliation, achievement, power and resources. They must establish methods for negotiating: conflict and consensus, synchronization of member activity and information processing and problem solving" (pp. 98-109). These variables represent interrelated relationships and concerns that sometimes compete and constantly change.

Campion and Stevens (1991) collected data from 391 employees, seventy managers and archival records in a single organization to distill characteristics that determine group effectiveness.

Themes included job design, interdependence, composition, context and process housing nineteen characteristics. Most characteristics predicted a portion of effectiveness but job design and process were slightly more predictive.

Forms of group work. Many methods have been developed to take advantage of the benefits group work can offer. What follows is a brief review of a selection of these methods.

Peer tutoring. There is a great deal of variety in implementations of the peer tutoring method (Webb & Palincsar, 1996). It always involves students explicitly using other students as learning resources and an acknowledgement of a knowledge gap between them. However, sometimes this takes the form of students seeking knowledge from the more knowledgeable other through inquiry and, in other cases, the more knowledgeable other takes an active role in delivering the knowledge.

Student teams-achievement divisions. Using the student teams-achievement divisions (STAD) method, students are assigned to four-member heterogeneous groups. The whole class experiences a lesson followed by team members working together to make sure the entire team mastered the content. This mastery is then tested on an individual basis; the scores are combined to produce a team score that is evaluated in comparison with the team's previous performance. Teams-Games-Tournaments (TGT) is a variation in which the final quizzes are replaced with inter-team tournaments (Slavin, 1991).

Jigsaw. In this method, students in a group are assigned a topic in which they must become an "expert" as part of a separate expert group. The expert then brings that knowledge back to his or her own group to contribute toward the achievement of group goals. Since each student only learns a portion of the content, the only way to learn all content is by supporting group members (Slavin, 1991). Slavin, having found it to be instructionally ineffective (1988), added quizzes and a STAD-style evaluation mechanism to strengthen participants' interdependence (Slavin, 1991).

Team-assisted individualization. Team-assisted individualization (TAI) was developed to test and take advantage of the learning benefits of group work with mathematics instruction

(Slavin, 1990a). This method sees individuals assigned to four- or five-person teams. These teams are heterogeneous from the perspective of skill level, sex and ethnicity. Students take a placement test and then work in their teams on instructional materials for individuals following a method that has teammates involved in checking their work; they all take brief tests bi-weekly. Daily, instructors provide lessons to small groups at the same point in the curriculum. At the end of each week of instruction, teams are rewarded based upon collective progress. The routine is broken up by traditional whole-class instruction every three weeks. Slavin reports that studies have shown achievement, attitudinal and behavioral gains using TAI compared with traditional instruction.

Cooperative integrated reading and composition. Following the success of TAI, its creators expended effort to bring these benefits to other fields of study; one such result was cooperative integrated reading and composition (CIRC) (Slavin, 1990a). This method involves reading groups of eight to fifteen students, determined by level, and then dyadic groups that check each other's work, effectively mixing skill levels. This method, like TAI, introduces new content in the large group format and then uses the smaller teams for verification and practice. Direct, teacher-led instruction is also incorporated. Also like TAI, the method shows significant positive impact when compared with traditional instruction.

Project-based. Project-based learning interventions are those in which all activity centers on the completion of a specific goal that has been designed such that completion would demonstrate mastery of the course content. These projects are often completed by a collaborative group (Barron et al., 1998; Helle, Tynjälä, & Olkinuora, 2006; Lee & Lim, 2012) and the level of satisfaction among students is high because they feel a sense of purpose to their efforts (Wolk, 1994).

Mills and Treagust (2003) reviewed the implementation of problem- and project-based learning in engineering fields and found that projects were readily adapted for coursework and were likely adopted by engineering students; projects were therefore better suited to engineering education than more traditional or problem-based methods. They did, however, recommend a slow introduction of project-based coursework, as it deviates significantly from the more traditional instructional practices to which a student is more likely exposed.

Barriers to successful group work. The benefits of group work do not accrue without effort. Successful implementation requires consideration on the part of the instructor and the designer of instruction (if they are not one and the same). What follows is a discussion of some of these barriers to group work.

Groups are difficult to study. Despite the significant benefits that have been demonstrated, and a wealth of scholarly research on the topic, there is much we do not know about how groups work. Even small groups are incredibly complex, as each individual brings a unique perspective and skillset to his or her work, both of which are evolving throughout the project, and peers are affected by each other (Fuhriman, Drescher, & Burlingame, 1984; Sharan, 1990; Webb & Palincsar, 1996). This becomes a significant barrier to understanding the internal dynamics of cooperative groups.

Furthermore, instructors have difficulty seeing into the black box (Hak & Maguire, 2000; Peterson & Miller, 2004; Subramanian, 2007) of collaborative learning contexts. Asking students to submit individual portions of the project or to provide a summary of the work is likely to disrupt and detract from the exercise (Goldfinch & Raeside, 1990). Alternatively, asking a staff member to observe group meetings directly is likely to be both disruptive and expensive in terms

of staff time. It seems that asking students to report, in some fashion, how they perceive the group's function is likely necessary to form a complete picture (Ellis & Hafner, 2005; Sharan, 1990).

Collaborative skills. Arguably the most significant barrier to group work is the fact that it is a learned skill that does not come naturally (Davis & Miller, 1996; Goldfinch & Raeside, 1990). Students should receive training on how to work effectively as part of a group (Blumenfeld et al., 1996; Goldfinch & Raeside, 1990; Sharan, 1990). Based upon their previously mentioned study (1998), Gardner and Korth suggested the provision of academic courses aimed at helping students learn to work together effectively. Benne and Sheats (1948) found that because group activities are so common, their efforts to train learners on working in collaborative groups amounted to re-training – most of us already have our own conceptions of group work and how we interact within teams.

Trust. In order to work together effectively, groups must trust one another. Trust is crucial in successful group situations and logistical difficulties can play an important role in making such trust possible. Experiments using the game “Prisoner’s Dilemma” have demonstrated that close face-to-face contact helps to foster trust (Wallace, 2004). While moving from a distance of three feet to twenty feet between participants reduced the quantity of cooperative behaviors in one study (Evans & Howard, 1973), virtual meetings or an impaired ability to meet at all made it difficult to establish and maintain the necessary levels of trust for successful group work.

Communications. For group work to succeed, members must be capable of more than just knowing how to solve a problem; they should also be able to effectively communicate that

solution to one another. One study found two examples of an inability to communicate (Barron, 2003). The first involved a group of three boys competing internally to provide the accepted solution. One boy was overruled early and let it pass as the group settled on an incorrect solution. In another instance, two of the group members worked together and effectively ignored the third's attempts to volunteer what was the correct solution. These difficulties in communicating become more pronounced when different cultures enter the mix. For example, in Asian cultures, students are generally expected to be passive learners and their reluctance to volunteer their thoughts may be seen by non-Asian group members (and possibly instructors as well) as lack of motivation (Pham Thi Hong, 2011).

In addition to culture, there is also evidence that the sex of participants plays a role in group dynamics. A 1984 study (Webb, 1984) found females to be more responsive than males to requests for help but the contributions of females were more often ignored than males in mixed-gender groups.

Dysfunctional group behaviors. In addition to the above factors, which can lead to difficulties in working either in or with groups, groups of individuals working together can exhibit behaviors that only take on meaning in a context intended to be collaborative. While Salomon & Globerson (1989) indicated that there was little effort devoted to documenting and describing negative effects, the results of some such efforts are available. Below is a description of documented dysfunctional group behaviors. Group members will often feel some sense of frustration at times over the course of the project (Coleman & Van Aken, 1991), but sometimes patterns of dysfunctional behaviors can be recognized that detract from one or more participants' learning experience. The names documented below reflect the label provided by the scholar who initially documented the behavior, but some could benefit from further thought.

Group Domination. In some groups, a particularly opinionated individual attempts to assert their authority through some combination of commanding other members and controlling conversation. This latter is often achieved by talking a lot, interrupting other members and/or devaluing their contributions (Cohn et al., 1960). This can lead some members to withdraw their own participation (Gillespie, Rosamond, & Thomas, 2006). Furthermore, Woolley et al. (2010) linked low c factors to groups in which group conversations are dominated by one or a few.

Ganging up on the task. A situation arises when only one member (or a small minority) of the group likes the task at hand and the rest instead opt to avoid the task. The enthusiastic students are certainly welcome to put in as much effort as they'd like, but do so knowing that it will not be matched by their peers. This leads to all participants putting their greatest effort toward avoiding the responsibility (Salomon & Globerson, 1989). The name applied to this behavior may cause difficulty in practice since the phrase *ganging up on* generally refers to a group's behavior towards an individual.

Groupthink. Groupthink is the situation in which group members will pursue a course of action that is perceived to be mutually agreeable out of concern for maintaining harmony within the group. This is a danger when participants are particularly concerned about friendships with their group-mates, as they will try to avoid the discomfort of being too critical (Falchikov, 1995). Even those knowledgeable in group work are susceptible to groupthink, as is demonstrated by one study of the development and deployment of an online self- and peer-assessment (SAPA) system (Fermelis, Tucker, & Palmer, 2008). In this case, the highly cohesive group of researchers themselves fell victim to groupthink, which caused them to overlook a technical error. Some researchers have reported on the use of personality tests to sort group members and

attempt to distribute them for optimal diversity and cognitive conflict to avoid this sort of situation (Fermelis et al., 2008).

While groupthink is commonly thought of as a negative, Haynes (2012) described situations where it can be positive. For example, an organization may exhibit pressure to accept certain standards of behavior to earn and maintain membership. The same organization may set unattainable, lofty goals for themselves and close their minds to any objections. They could even go further by suggesting that anyone raising an objection is insufficiently committed. As a result, the group's members work harder to achieve the goals and maintain harmony within the group—all the indications of groupthink are present, but the outcome is positive.

The farrago. Some groups are, themselves, characterized by a disruptive individual, dubbed “farrago” by Stohl & Schell (1991). The farrago manages, by various means, to focus attention on him- or herself; this lends the farrago a measure of control over the group. This control is not seized explicitly and does not contribute toward the group's formal goals or productivity. According to their analysis, the farrago relationship was actually reciprocal, as the rest of the group facilitated and perpetuated this control through their responses. It is a system of learned behaviors that is not remedied by removal of the individual or imposition of rules, but rather it must be trained out.

Keyton (1999) looked at interactions in dysfunctional teams in the workplace and their impact upon team effectiveness. They found that the presence of a farrago did not necessarily prevent the team from completing its tasks, but did negatively impact satisfaction.

Social loafing. A common fear among both group participants and instructors is that of “free-riding” or “social loafing.” This is the situation in which a member of the group under-

contributes to group performance, thereby forcing the rest of the group to do that member's work, on the assumption that the extra effort is worth the reward for successful completion (De Vita, 2001; Salomon & Globerson, 1989). This behavior is more difficult to identify with larger groups, as it becomes difficult to track individual contributions. There are indications that this may be less of an issue with dyads (Alkaslassy, 2011). Bennett and Naumann (2005) make a distinction between social loafing and free riding by explaining that the latter involves deriving unearned benefit from the group while the former focuses more on the circumstances which make it possible. This is a subtle distinction because it refers to the self-awareness and intent of the loafer/rider and the other group members while in both cases, one derives the benefits of the group's effort without contributing their share to it.

While responsible students naturally dislike this situation because they fear they will be exploited, this also poses a very real problem for instructors: how to allocate credit for an assignment if social loafing has occurred.

Sucker effect. When one member of the group is better suited to the tasks at hand, that student may feel disproportionately burdened. This may result in the hard-working member gradually contributing less so as to avoid being exploited (made a "sucker"). This often leads to a dip in morale and in performance (D. W. Johnson & Johnson, 1990; Salomon & Globerson, 1989).

Leave it to George. An alternative take on the "sucker effect" sees less able students' participation levels dropping off precipitously as they "leave it to George," the more able member (D. W. Johnson & Johnson, 1990).

Rich get richer. Social status (or perceived social status) differentials can lead to a negative effect for group members. High-status individuals within a group can tend to dominate the group's interactions and monopolize a majority of the help-seeking and help-offering behaviors within a group. As a result, they receive the help and practice that will enable them to thrive, while others in the group may be starved. This has been called the "rich get richer" effect (Dembo & McAuliffe, 1987; D. W. Johnson & Johnson, 1990).

Division of labor. A review of the issues that accompany the incorporation of computer technology into the classroom highlighted the need for students to be trained on how to perform as a group (Sheingold et al., 1984). They cited a situation in which a pair was assigned strictly defined roles along manager/worker lines. While this might work well in a cooperative group to which everyone is expected to contribute according to their strengths, it was less effective for learning, in which each member is expected to develop a new set of strengths.

Inappropriate dependence upon authority. A study observing thirty students working in dyads toward a computer-programming task (Webb et al., 1986) found that, while those who asked questions of the instructor tended to complete the task, the correlation with understanding the task was low. On the other hand, those students who asked questions of each other and completed the task were better able to understand the content as demonstrated by their ability to interpret a program. The authors suggested that the former group depended too heavily on instructor guidance.

Personal conflict. While intra-group conflict predictably creates an undesirable working environment and reduces student satisfaction, its presence has been shown to correlate with higher performance (Baldwin et al., 1997; D. W. Johnson & Johnson, 1979, 1985). Personal

conflicts, however, pose a threat to successful group work. A study of cognitive conflict showed that, while cognitive conflict tended to result in more creative solutions, conflict on a personal level interfered with group performance (Badke-Schaub et al., 2010). It should be noted that the project observed in this study was only 50 minutes in duration and that longer projects might yield different results.

The effects of dysfunctional group behaviors. The dysfunctional group behaviors listed above can detract from the learning experience in a number of possible ways. In some cases, the dysfunction develops into another dysfunction (Salomon & Globerson, 1989). One example is of *leave it to George* resulting in “George” feeling taken advantage of and discontinuing further contributions—a situation that might be classified as either *sucker effect* or simply *social loafing*, depending upon perspective. This is likely to result in other students feeling overworked as they pick up the slack, and our George may not get adequate practice to meet the performance objectives of the course.

In a situation like *rich get richer*, low-status individuals are left out and do not get the opportunity to practice. Furthermore, the individuals who’ve been left out also have their low status reinforced and legitimized, making it all the more difficult for them to gain any form of power in the future (Ridgeway & Berger, 1986). Salomon and Globerson (1987) speculated that this sort of rejection induces a form of helplessness. They further hypothesize that this mechanism serves to reinforce beliefs that certain tasks are gendered (e.g., females can come to believe themselves less able to take on certain *male-oriented* tasks).

Riggs and Knight (1994) used structural equation modeling to show that when students perceive their group project to be a failure, their subsequent motivation suffers. This implies that the

greater the disruption to the collaborative learning project caused by dysfunction, the more negative the attitudes of those students regarding future projects. The study did not investigate actual future task performance.

Evaluating Collaborative Projects

About assessment. Scriven (1991) defined assessment as “the process of determining the merit, worth or value of something” (p. 139). Bloom’s Taxonomy of Educational Objectives, first published in 1956, has served as a framework for describing the goals of test items and assessments (Krathwohl, 2002). The major categories include knowledge, comprehension, application, analysis, synthesis and evaluation.

Assessment can be viewed as a sort of academic currency, serving to recognize and compensate students for the efforts they put forth (Boud et al., 1999). Assessments can be classified as either criterion- or norm-referenced, while the application purpose of an evaluation might be either summative or formative. Additionally, the evaluator’s relationship to the evaluatee can vary from one evaluation to another.

What to assess. When assessing the effectiveness of a group, Hackman (1983) specified three dimensions: (1) the output should meet or exceed expectations, (2) the social processes should maintain or improve participant ability to work on later team tasks, and (3) the experience should satisfy members’ personal needs. When designing such an assessment, the instructor must be clear on what is to be assessed. Young and Henquinet (2000) presented a framework for designing group projects. Their approach advocated designing group projects from the standpoint of how they will ultimately be assessed (i.e., what will be assessed and who is involved in assessment).

Falchikov (1988) investigated the use of self and peer assessment in group work. She observed four female students as they worked through a group project and they subsequently assessed one another's contributions. The results were positive with respect to attitudes toward the assessment, and the rank ordering was internally consistent between participants. More interesting, though, was the finding that one participant contributed more toward group morale than moving the group forward with respect to the product.

Layton and Ohland (Layton & Ohland, 2001) recommended a focus on group work skills rather than student ability based upon their study (reported above), which found that they were able to resolve the effects of race on peer assessment by directing participants to focus on group work and not student ability. Boud, Cohen and Sampson (2001) also recommended a focus on process. They explained that peer assessment can benefit students by helping them value peer learning.

If we are interested in group process, how should it be defined? Watson, Kumar and Michaelson (1993) defined it as “the actions of group members that affect one another over time” (p. 591). Fuhrman et al. (1984) point out that we must be careful in how we conceive of group process. Conceiving of group process as phenomena, or “aspect or characteristic of group behavior” (p. 431), would suggest measurement and observation of discrete incidents for analysis – possibly building up to a larger picture over time. On the other hand, viewing group process as interaction, or a fluid and continuous set of actions and reactions, invites different measurement techniques, beginning with the biggest picture.

Effects of assessment on learning. The feedback provided to students as a synthesis of assessment data is important to help students to learn the content and understand where their own performance is deficient (C. M. Brooks & Ammons, 2003; Reily, Finnerty, & Terveen, 2009). In

situations where peers mark each other's papers, it affords them the opportunity to see and learn from alternative perspectives by viewing others' answers (Al-Smadi, Guetl, & Kappe, 2010). Furthermore, the assessment is a primary indicator of importance from the perspective of the student—regardless of what the instructor says, if it is on the quiz, it is important (Brown & Pendlebury, 1992).

Barriers to effective assessment. Assessment of group work is very labor-intensive because there are many dynamic elements affecting outcomes (Fuhriman et al., 1984; D. W. Johnson, Johnson, & Holubec, 1994). This implies that many resources are needed for both data collection and analysis. Johnson, Johnson and Holubec (1994) recommended involving students in their own assessment, collecting the assessments in the context of the groups and using a criterion-referenced system to avoid comparisons and therefore reduce competition.

According to Boud et al. (1999), peer learning often pursues outcomes that are difficult to assess, such as group work, metacognitive skills, communication skills and community membership. Additionally, attempts to capture these sorts of information can lead to competition, which may counteract the benefits of collaborative group work, encourage efforts to defeat the assessment, and task overload from engaging in numerous measurement efforts.

Assessment strategies. Assessment of group projects is a daunting task for instructors (King & Behnke, 2005). Instructors cannot see everything that happens within a group unless all activity occurs under their direct observation, and this is infeasible. The situation is further complicated by ambiguity with respect to the target of assessment: Are we assessing the product of the group's efforts or the process by which it was developed? Therefore, instructors have devised alternative methods to gain the information and insights they require.

- Some instructors will offer a group grade that is the same for all group members (Lejk, Wyvill, & Farrow, 1996; Subramanian, 2007). This method is sometimes modified by a mechanism for group members to assign penalties, through a process set out by the instructor, which may amount to negative points or exclusion from the group. Subramanian (2007) developed the Contributive Role Scale to measure and attribute individual contributions to group projects.
- Other instructors divide the project into sub-projects and assign individual group members responsibility for those specific sub-projects. In a variation on this method, instructors use group projects primarily to provide opportunities to practice working with the content, while grades on individual assignments carry the greatest weight (King & Behnke, 2005).
- Similarly, some instructors design the project such that it is easily decomposed and individuals can take responsibility for specific modules (Tucker & Rollo, 2005). This may work well in some cases, but it often prevents the production of a seamless and unified design—the whole is often less than the sum of its parts.

While evaluations are often carried out primarily by professionals or subject matter experts, such as the teacher in a classroom, this is not the only possibility. In some cases, the information might not be realistically available to an outside observer; sometimes the objectivity, or freedom from judgment in scoring (presumed to be of value), decontextualizes the evaluation and removes its meaning (Gipps, 1999). In educational contexts, the intellectual process of assessing value is a valuable learning experience. For these reasons, some evaluations rely instead upon the participants themselves to perform the assessments.

Additionally, engaging students in assessment of their own work offers important benefits for the student. It has been suggested that it promotes higher levels of thought (Falchikov, 1991).

Students engaged in forms of peer assessment gain a deeper understanding of the instructor's expectations as evidenced by a convergence between peer and instructor grades as the course progresses (Freeman, 1995). Such assessments also raise awareness of group dynamics and the tasks involved in a group setting (Brown & Pendlebury, 1992; McConnell, 2005; Williams & Wessel, 2004).

- Some instructors ask their students to turn in a reflection paper indicating the group members' contributions to a single group product or participate in a reflective discussion (Edmunds & Brown, 2010; Williams & Wessel, 2004).
- Still others ask students either to rate their peers' contributions or to allocate points to each other, according to individuals' efforts.

On the other hand, care must be taken when transitioning the role of assessor away from the instructors (Falchikov, 2003). The instructor plays a primary role in helping students acquire skills and knowledge, and in setting up and maintaining the assessment method.

A literature review of peer-assessment methods in groups (Kane & Lawler, 1978) looked at peer rating, peer ranking systems, and peer nomination systems. They found that peer assessments were resistant to changes in group compositions, but susceptible to interpersonal biases; they cautioned that peer assessment only be used as part of a system where it is capable of providing unique insights. Some examples include over-marking based upon friendships ("friendship marking"), students conspiring to mark everyone equally ("collusive marking"), dominant individuals being awarded highest marks ("decibel marking") or non-contributors benefitting

from group marks (“parasite marking”) (Pond & Ul-Haq, 1997). Alternatively, vindictive classmates might collude to sabotage a peer’s grade (Tucker & Rollo, 2005).

Hall’s fictionalized case study (Hall & Wasynczuk, 2011) dramatized a significant problem with the semi-annual or annual peer review process in the corporate environment: We tend to want to score everyone slightly above average (in this case four out of five) in such a high-stakes situation. We do not want to rate our peers negatively; therefore everyone is rated the same. A book on assessment of active learning (Brown & Pendlebury, 1992) recommended a broad assessment strategy to cover the multiple ways in which students learn, the types of knowledge they learn and the different ways of demonstrating that knowledge.

Diagnosing group dysfunction. There is little research available regarding the diagnosis of group problems. Benne and Sheats (1948) trained future group members on the value offered by different functional roles when groups approach different stages of problem solving. They found that this enhanced the ability of the group members that were trained to diagnose and attempt to meet their group’s role needs.

Bales and Cohen (1979) developed the SYMLOG theory and method to analyze small group interactions. The method involves plotting individuals or a group of individuals in a three dimensional SYMLOG space where the y-axis corresponds to domination vs. subordination, the x-axis represents friendly vs. unfriendly and the z-axis represents task orientation vs. emotional expressiveness of an individual. Data is entered either in real time by trained observers or through a rating form. Trained scorers can distinguish between high- and low-performing groups. Raters using the rating form do agree with one another despite lack of formal training (Keyton & Wall, 1989). The nature of the dimensions offers meaningful visualizations accessible by all.

The SYMLOG method has been used to identify ineffective work groups in a business context (Polley, 1985). The data serves as a snapshot that can be interpreted in a visual format that suggests areas to work on for improving the situation. While data may include multiple individuals, the individual is generally the unit of analysis. Keyton and Wall (1989) found that using this method at the group level may “dampen” (Keyton & Wall, 1989, p. 561) the variance and prevent a full assessment.

Naquin (2003) reported on two studies that found that, while groups and individuals both take the credit for successes, it is individuals who receive the blame for failure. They acknowledge, however, that these results were achieved in an individualistic society and they may be different if performed in a more collectivist society. Fuhrman et al. (1984) noted that small group researchers are distracted by the issue of unit of analysis and whether to look at the individual, the individual in the context of the group or the group itself.

Goodman et al. (2005) used textual analysis of online conversations between group members in an online course to identify markers of inactivity or domination. This analysis was used by an automated agent which attempted to intervene. Similarly, Chang, Chen and Wang (2011) used a data mining tool to identify informal student roles enacted in a web-based course on software development. They further developed a statistical model for using this information to predict future performance for the group. The availability of such information may enable instructors to intervene so as to make sure their groups remain on track.

Summary

Collaborative learning has a long history of use and scholarly research. Students taking part in collaborative learning activities develop social skills, problem-solving skills and demonstrated

improved academic performance. They also tend to feel both satisfied with and capable of completing the tasks set before them. Additionally, they learn to use their peers as resources and their learning is reinforced by the opportunity to provide assistance to group mates in need. Finally, these experiences prepare them for the realities many will face upon graduation, as group work is increasingly common in organizations today.

Many factors contribute to the success of collaborative group work. If an instructor aims to adequately prepare their students to function in what is an increasingly collaborative environment, they must become familiar not only with expected structure of healthy groups, but also with dysfunctional group behaviors. Without an understanding of dysfunctional behaviors and an ability to recognize them when they appear, they will be severely constrained in their ability to develop their students' collaborative skills; many of their students will develop a distaste for collaborative group work. Furthermore, depending upon the nature of the dysfunction, the instructor's evaluations may misrepresent the earned skills and growth of their students.

The inability to see into the black box that is group work makes it difficult to assess individual learning. Many instructors assess the group's work product and split the grade evenly among its members. Others attempt to collect data to inform individualized grades. Sometimes, this data comes from peers; in other cases, it comes from the individual whose work is being assessed.

What is thin in this review of the literature are markers used to identify dysfunctional group behaviors. Virtually absent is discussion of what instructors look for or how they approach the task of diagnosing group dysfunction. It is this gap in the literature that this study begins to fill.

Chapter 3 – Methods

Purpose of this Study

In this study, I aimed to investigate how instructors with experience employing long-term group projects in their teaching respond when asked to diagnose a fictional group experiencing equal participation, social loafing or group domination. I sought to understand the factors that influence an instructor's diagnosis and whether these factors are consistent between instructors.

Research Questions

1. To what extent can instructors distinguish healthy or dysfunctional collaborative learning groups as represented by a fictional narrative account from one group member?
2. To what extent can instructors distinguish different forms of collaborative group dysfunction as represented by a fictional narrative account from one group member?
3. How do instructors explain their diagnoses of collaborative group dysfunction as represented by a fictional narrative account from one group member?
4. To what extent is the approach of instructors to the diagnosis of collaborative group dysfunction, as represented by a fictional narrative account from one group member, consistent among instructors?

Researcher's Perspective

This study emerged from an effort to develop a method for using self- and peer-assessment to provide instructors with advanced warning of dysfunctional group behaviors in collaborative learning groups. The effort employed fictional narratives representing equal participation, social loafing and group domination groups. However, in an attempt to validate these narratives through instructor diagnosis there were strong indications that the instructors which constitute

the target audience for the method, may approach the task in very different ways. The current study aimed to understand these potential differences.

Operational Definitions

Small group: This is a group consisting of three to five individuals (Oakley et al., 2004; Richards, 2009; Wheelan, 2009).

Collaborative group: This is an interdependent group of individuals working toward a common goal. Members are expected to meet a baseline set of skills to the group's task(s) (Bruffee, 1995; Dillenbourg, 1999; Matthews et al., 1995; Panitz, 1999).

Group Process: These are the behaviors undertaken by a group's members as they work together to determine and achieve their goals.

Group behaviors.

Equal participation group: Group members are each contributing roughly equal parts toward the group's efforts to achieve its goals. There will be variability in the types of contributions, and individuals may see peaks and troughs, but overall, the contributions are roughly equal.

Group domination (Cohn et al., 1960): This is when an individual asserts his or her authority through some combination of commanding other members and controlling conversation. This often involves the individual interrupting and otherwise devaluing the contributions of others.

Social loafing (De Vita, 2001; Salomon & Globerson, 1987): This is when an individual consistently under-contributes to the efforts of the group to achieve its goals. This forces other group members to do extra work if the task is to be completed successfully.

Ganging up on the task (Salomon & Globerson, 1987): This is when only one member of the group engages with the task at hand and the rest actively avoid it. The engaged member becomes overwhelmed, and joins the rest of the group in avoidance activities.

Methods

The method I employed in this study is most accurately described as grounded theory, as it looked primarily to the emergent themes of the collected data to generate theory rather than building upon existing theoretical work (Glaser & Strauss, 1999). While one of the hallmarks of this approach is to forego a review of the literature in favor of relying upon the collected data as your guide (McLeod, 2001), in this case, an extensive review of the literature returned scant results, leaving no alternative. Furthermore, I take the view, in line with that of Glaserian grounded theory, that the focus is on “immersion of the researcher in the data” (McLeod, 2001, p. 61), allowing for flexibility in approach, rather than that of Corbin and Strauss (2008), which stresses strict adherence to method. Analysis performed after the first phase of data collection informed the design of the second phase of data collection.

This exploratory study was completed in two phases. During these phases, I collected both quantitative and qualitative data that I subsequently analyzed using statistical methods and thematic analysis (Braun & Clarke, 2006), respectively. Statistical methods were used to characterize the level of inter-instructor consistency in their diagnostic responses to an individual narrative, across narratives comprising a scenario, and across scenarios. I used thematic analysis to identify and consolidate instructors’ approaches into strategies. I added the data collected in phase 2 to that from phase 1 and analyzed the corpus using a constant comparative approach in which I actively sought to identify, evaluate and re-evaluate connections between categories until a main category or set of categories emerged.

In the first phase, I asked instructors experienced in the use of collaborative group projects to classify a fictional collaborative group (presented in narrative form) as equal participation or to label it with a dysfunctional group behavior. In the second phase, I asked similarly-experienced

instructors to complete the same exercise using a modified think-aloud protocol. After analysis, I engaged a dispassionate peer to review my analysis and challenge my perspective and my findings.

Materials

This study required the development of specialized materials to collect the necessary data. These materials consisted of narrative content to simulate the group situation and a custom-built, web-based instrument to deliver the content and solicit responses.

Narrative Content. Using the operational definitions for equal participation, social loafing and group domination, I authored three group work scenarios from the perspectives of each of the four fictional student participants in the group (i.e., twelve narratives). Table 2 summarizes these scenarios and their participants from the perspective of the author; the full scenario and narratives are in Appendices I-L. One set models a group experiencing the ebb and flow of equal participation, another represents an instance of group domination with one member constantly asserting their authority and imposing their will on the group and the third showing social loafing with a member who becomes disappointed in the group's early performance and subsequently avoids contributing for the latter two thirds of the project.

The narratives were authored with the intent that an instructor would only ever read from the perspective of a single group member from any given group over the course of the study. While some instructors may assign and review reflections to all members of a team, many do not use reflection at all and only learn of a team's progress when a student comes to them with a concern.

Table 2
Summary of scenario highlights

Intended Behavior	Members	Notable member characteristics and events
Equal participation: Students show different strengths and weaknesses. Individual participation waxes and wanes.	Lionel	Transfer student; low confidence in his own skills.
	Natasha	Leader; hard worker
	Anika	Not quite getting it; skips meeting to visit ill mother; worker
	Alex	Relatively weak skills; hard worker; willing to put in time and effort.
Social Loafing: Upperclassmen begins strong but disengages after early group decision against his recommendation. He skips two meetings and turns in poor quality work. Participates in meetings when present.	Iain	Upperclassman; starts off strong; participation drops off after fourth week
	Hannah	Quiet; accident places her in hospital causing her to miss a meeting
	John	Works hard; conservative; actively improves his skills; picks up slack from others
	Marie	Creative; struggling to understand; high effort; improving quality
Group Domination: Upperclassmen with experience and strong vision enforces her vision on the group.	Anna	Assertive; insensitive
	Jose	Athlete; maintains a competing vision for project that is consistently overruled by Anna
	Kim	Quiet; capable; peacemaker
	Sam	Hard worker; quiet; creative; joker

These narratives represent fourteen weeks of class (i.e., a full semester) and were written with breakpoints between weeks. I circulated these narratives among family and friends, and employed a professional content developer to assist with authorship, checking for voice, language level and internal consistency between each group of four narratives. These audiences were also asked for guidance regarding plausibility of the events.

Web-based instrument. For this study, I designed and developed a web-based instrument using the Ruby-on-Rails (Hansson, 2014) web application framework in conjunction with the jQuery Mobile (Schmitz, Colom, Schulhof, Seguin, & de Groot, 2014) user interface system to render a mobile-friendly interface. The instrument was designed primarily to serve as a mechanism for delivering the student narrative content to the instructor and for enabling them to report back their evaluation and diagnoses.

A participant using the instrument would be initially presented with information about the study and asked for their consent to participate. Next, it asked for some demographic information (see [Appendix A](#)). First, it required that instructors answer how many times the instructor had used long-term collaborative group projects to verify their eligibility (they must have used them at least twice) and to gauge their level of experience with such group projects. The next two questions were optional. It asked instructors to volunteer the state in which they teach to judge the diversity of institutional contexts represented. The instrument also asked instructors to supply their subject area (National Center for Education Statistics, 2010) to further characterize the diversity of their experience, training and subject matter expertise. The demographic information is presented later in tables 3-5.

After completing the demographics section, the instrument presented instructors with instructions for completing the diagnostic task, including the overarching group project context (see [Appendix H](#)), definitions of the group behaviors used in the task (equal participation, ganging up on the task, group domination and social loafing). The instructions explained that the instructor would read through a fourteen week narrative portraying one group member's description of the events that occurred relating to the collaborative group project. They would read one week at a time, diagnose the group's behavior after the week and then move on to read

the next week. The instrument made it clear that, as groups are dynamic, it was expected that answers may change from one week to the next. In addition to the diagnosis, the instrument required instructors to assess the plausibility of the narrative presented in each weekly installment.

After completing all fourteen weeks from the one group member's perspective, the instructor would be asked to diagnose the group's behavior over the entire project.

After the instructor indicated that they had read the instructions by clicking the *next* button, the instrument assigned the instructor a single narrative, representing one group member, based upon the following rules, which optimize the path to achieving an even and unbiased (if not truly random) distribution:

1. If the instructor had already responded to three scenarios, he or she was no longer eligible.
2. If the instructor had already responded to one or more scenarios, he or she was restricted to narratives from un-read scenarios.
3. Of the remaining, eligible narratives, the instructor was assigned to the one with the fewest responses at that moment.
4. If more than one scenario shared the characteristic of the lowest number of recorded responses, one would be randomly selected from this (lowest responses) pool.

The instrument presented the first week of the selected scenario along with a form for the instructor to label the narrative as representing one of the following (see [Appendix B](#)):

- Equal participation
- Group domination

- Social loafing
- Ganging up on the task
- Other
- I don't know

A response of “other” required that the instructor include an alternative label for the week. Upon completing a report on a simulated week, the instrument also asked instructors if they believed that week’s narrative to be plausible and, if not, to please explain why not. Finally, there was a space for instructors to enter any further comment they may wish to add. No comment was required or requested and the configuration of the user interface slightly discouraged use of this element – entering comments takes time and I did not want to overburden my participants.

When one week was completed, the instrument asked instructors to repeat the process for the next “week” of narrative until they had responded to all fourteen weeks. After completing all fourteen weeks’ worth of responses, my instrument asked instructors to reflect on the entire narrative and to specify a label that best described the narrative overall. Upon specifying an overall diagnosis, my instrument offered instructors the opportunity to see the author’s target behavior (i.e. the behavior I wrote the narrative to convey) and to provide guidance on improving the narrative.

The instrument provided a *pause and resume* later feature in case the instructor could not finish the task in a single session. This was accomplished by pressing the *pause* button and entering an email address. This would cause the system to email a link to the instructor for them to later resume where they had left off. Additionally, instructors were encouraged to complete an evaluation of up to three narratives. For each evaluation, the web-based instrument, assigned a

narrative from a scenario to which they had not yet responded. Instructor participants were identified by their email address.

Phase 1:

Diagnosis from narratives using an automated instrument.

Participants and context. I recruited participants for phase 1 using a variety of methods. Initially, I tried broadcast posts to Facebook and LinkedIn social media groups and emails to instructional designer mailing lists (asking them, in turn, to pass the request on to their clients), but these methods were unsuccessful. Next, I used the American Educational Research Association (AERA) member directory to select 1700 candidates and target them with personalized emails. This method was followed by a request through the Association for Educational Communications and Technology (AECT) to its membership, which effectively endorsed my study and requested participation. Both of these methods netted a number of responses, but did not meet my requirement. Finally, I targeted an additional 1500 AERA candidates with personalized emails and achieved my desired numbers.

The request, regardless of the method by which it was received, directed instructors to respond to a web-based questionnaire and offered an incentive to one randomly selected instructor in every fifteen who complete the session. Respondents were considered eligible if they had conducted two or more courses making use of collaborative group projects lasting eight weeks or more, with groups consisting of three to five students each.

I collected data until I received sixty complete responses—with a target of the broadest possible distribution of total responses across narratives and five completions for each narrative.

The phase 1 data represents fifty-four completed unobserved sessions (fourteen weeks and an overall conclusion) provided by fifty-two participants, plus data from twenty-three incomplete sessions. Each completed evaluation represented a “bid” for one of four incentives offered to the instructors. When data collection was completed, I randomly selected four instructors, and then contacted their owners to coordinate delivery of the incentive.

My recruitment methods yielded 278 instructors who consented to participate in phase 1, but not all were eligible. Of the eighty-one sessions that were initiated, I removed six as suspicious (see [Checking for data validity](#)), yielding seventy-five instructors who met the criteria for participation and responded to at least one week of the narrative. Of those seventy-five, fifty-four which constituted complete sessions, with two responding to two different scenarios in this phase. Twenty-one participants began but did not complete sessions.

The participating instructors in phase 1 teach in fifteen distinct topic areas with one instructor preferring not to answer and two preferring not to answer. Thirty-two taught some form of education. Instructor experience with this sort of group project varied, but fifteen had used them two or three times while twenty-three had used them ten times or more. The instructors represented twenty-two states while one reported *armed forces* and two preferred not to answer. These demographics show that the participants were from multiple different universities with a variety of experience levels, but that those teaching in the field of education were the most heavily represented. The demographic data from both phases 1 and 2 are reported in tables 3-5.

Table 3

Educational topic area distribution of participants by phase and session completion

Classification of instructional program code	Phase 1	Phase 2	Total completed	Total incomplete (from phase 1)
Area, ethnic, cultural, gender, and group studies.	1		1	0
Biological and biomedical sciences.	1		1	1
Business, management, marketing, and related support services.	3		3	1
Communications technologies/technicians and support services.	1		1	0
Computer and information sciences and support services.	0	1	1	0
Education.	32	5	37	11
Engineering.	1		1	0
English language and literature/letters.	0		0	1
Health professions and related programs.	2		2	0
History.	0	1	1	1
Interpersonal and social skills.	1		1	0
Liberal arts, and sciences general, general studies and humanities.	1	1	2	1
Mathematics and statistics.	1		1	2
Natural resources and conservation.	1		1	0
Parks, recreation, leisure, and fitness studies.	0	1	1	0
Physical sciences.	1		1	0
Psychology.	3	1	4	2
Social sciences.	2		2	0
Visual and performing arts.	0		0	1
Other.	2		2	0
I prefer not to answer.	1		1	0
Total	54	10	64	21

Table 4

Number of times participants report having used long-term collaborative group projects for learning in their classrooms by phase and session completion

Number of group projects	Phase 1	Phase 2	Total completed	Total incomplete (from phase 1)
2	8	1	9	4
3	7	1	8	2
4	4	2	6	4
5	4		4	2
6				1
7	2		2	
8	5		5	
10	1		1	
More than ten	23	6	29	8
Total	54	10	64	21

Table 5
U.S. State distribution of participants by phase and session completion

States reported	Phase 1	Phase 2	Total completed	Total incomplete (from phase 1)
Armed forces	1		1	0
Arizona	1		1	1
California	9		9	0
Colorado	1		1	1
Florida	2		2	2
Georgia	0	1	1	0
Iowa	0		0	1
Idaho	3		3	0
Illinois	0		0	1
Indiana	3	3	6	0
Kansas	1		1	0
Louisiana	1		1	0
Massachusetts	1		1	0
Maryland	0	1	1	1
Michigan	4	2	6	0
Minnesota	2		2	0
Mississippi	1		1	0
North Carolina	2		2	1
New Jersey	3		3	1
New Mexico	1		1	0
New York	2		2	1
Ohio	0	1	1	1
Oklahoma	0		0	1
Oregon	2		2	0
Pennsylvania	2		2	1
South Carolina	2		2	0
Tennessee	0		0	1
Texas	5	1	6	3
Virginia	2		2	2
Washington	1		1	0
I prefer not to answer	2	1	3	2
Grand Total	54	10	64	21

Data collection protocol. For this phase, I directed the instructor participants to a web-based instrument that, in a single session, presented an instrument-selected narrative, one

simulated week at a time. The instrument was available from any connected web browser (desktop or mobile) continuously throughout the period of data collection. This allowed them to participate whenever and wherever convenient for them. Upon agreeing to participate and being determined to be eligible, instructors were asked for optional demographic information. They were then assigned a narrative and asked to diagnose the group's behavior and the narrative's plausibility in each week. Finally, they provided an overall diagnosis for the group and were offered the opportunity to compare their diagnosis with the intent of the narrative and provide further feedback.

After concluding a session (consisting of the above), instructors were asked for their email address to be considered for the incentive. They were also informed that, if they provided an email address, they would receive a link to allow them to complete the task two more times in return for two more changes at the incentive.

This method was piloted with four individuals who provided feedback on the process, but whose responses were not included in the analysis.

Data analysis. After using the activity time and date information to weed out suspicious data (see [Checking for Data Validity](#)), I reviewed the perceived plausibility by calculating initially the percentage of the responses that indicated implausibility in the narrative. I subsequently drilled down to the narrative and week level to identify any specific problems. Next I read the text of responses provided by the instructors when asked to explain why a week was implausible to look for any trends.

After reviewing plausibility, I looked at the overall diagnoses for trends in agreement (or disagreement) with the intended target behavior. This was followed by reading the overall

feedback provided. Then I performed the same review using the weekly data and any information provided in the comments field of the instrument. At this time I also calculated the Fleiss' Kappa using the R package "irr" (Gamer, Lemon, Fellows, & Singh, 2012) to quantify instructors' agreement with one another when responding to the same week's narrative.

Phase 2:

Direct observation of diagnosis from narratives using an automated instrument in a think-aloud protocol

Participants and context. For phase 2, I sent personalized emails to the list of instructors I generated in phase 1 (i.e., the members selected from AERA and those who expressed interest from AECT). In this phase, all participating instructors were offered an incentive for completion. The emails invited them to participate in a synchronous session under my observation using audio conferencing (audio was sufficient, but video or face-to-face sessions were used when possible). Prior to scheduling a session, I verified their eligibility by asking them the same questions regarding their experiences with collaborative group projects in a learning context as were asked of participants in phase 1. Again, I limited participation to those instructors who had conducted two or more courses making use of collaborative group projects lasting eight weeks or more, with groups consisting of three to five students each. I allowed instructors who had already participated in phase 1 because none had fully completed narratives from all three scenarios.

Phase 2 consisted of ten participants, including two returning instructors from phase 1 (the instrument assigned them to new scenarios on their return). The participating instructors in phase 2 teach in six distinct topic areas with five teaching some form of education. Six instructors had taught using this sort of group project ten times or more and the other four had used them four

times or less. The ten instructors represented seven states. These demographics again show that the participants were from multiple different universities with a variety of experience levels and topics with education the most heavily represented. The demographic data from both phases 1 and 2 are reported in tables 3-5.

Data collection protocol. For this round of data collection, participants worked through a modified version of the web-based instrument used in phase 1. The modifications were piloted with two individuals who provided feedback on the process, but whose responses were not used. The changes in the new version consisted of:

- Updated informed consent document
- Removal of the question on plausibility.
- Fixes to enhance the plausibility of the narratives identified during phase 1. (Examples of such fixes include changing the term “slide deck” [jargon that confused some instructors] to “PowerPoint,” and removing references to phone calls, as multiple instructors indicated that students don’t call; they text).
- The instrument selected a prompt (see [Appendix E](#)) to instructors to explain their thought process after each diagnosis.
- The instrument included a researcher’s screen which showed the current participant’s responses—including from previous sessions (if applicable).

While coordinating logistics, I asked the participants if they had already completed one or more sessions during the initial round of data collection. I made sure those returning participants were able to take advantage of the instrument’s *pause and resume later* feature to automatically select a narrative from a scenario that they had not yet completed. These sessions were audio-recorded

using a [LiveScribe Echo](#) smart pen to synchronize the recorded audio with notes written on paper.

Upon beginning the session, I informed participants that the focus of this session was on how they arrived at their diagnoses, rather than the diagnosis itself (see [Appendix D](#)). I informed them that I would therefore ask them to follow a think-aloud protocol and prompt them after each week to explain how they arrived at their decision and what, if anything, made the decision difficult or easy (see [Appendix E](#)). After week 14, the instrument prompted participants to reflect upon the entire narrative and assign an overall diagnosis for the group. Again, I asked them to explain how they arrived at their decision and what factors, if any, made the decision easy or difficult.

In concluding the session, I asked participants questions to get a sense of their approach to managing group work and group dysfunction in their classrooms (see [Appendix F](#)).

Data analysis. Quantitative analysis in phase 2 included both the data collected in phase 1 and that from phase 2. I began by reviewing the overall diagnoses for trends in agreement (or disagreement) with the intended target behavior. Then I performed the same review using the weekly data collected by the instrument. At this time I recalculated the Fleiss' Kappa using the R package "irr" (Gamer et al., 2012) to quantify instructors' agreement with one another when responding to the same week's narrative. I also used a Kruskal-Wallis test (Chan & Walmsley, 1997) using R (R Core Team, 2014) to determine whether the data indicated distinct sources rather than differences attributable to random chance. A Wilcoxon Signed-Rank Tests (de Winter & Dodou, 2010) was used to further determine the relationship of the response to the different narratives.

After all the phase 2 recorded sessions were transcribed, they were added to the qualitative responses from phase 1 and the entire corpus was analyzed for themes. I analyzed the corpus using a constant comparative method focused on utterances representing a thought as the unit of analysis. This was achieved using Dedoose (2015).

Checking for Data Validity

A review of the ninety-one sessions initiated as part of phase 1 revealed six suspicious entries, based upon the time they took to offer their weekly responses. While comparison to the average time to complete (four minutes and nineteen seconds) may be misleading, since some instructors clearly used the *pause and resume later* functionality (yielding response times that spanned more than twenty-four hours), more than half of the responses in these six entries were completed in less than twenty seconds per response. Specifically:

- Three in a row (sequential user ids) answered either entirely consistently or apparently randomly in under ten seconds per week.
- Three more (non-sequential user ids) seem to have started off making some effort (in the forty-second range), but then diminished to below ten seconds per response.

These periods seem too short for instructors to read the few paragraphs of narrative, seriously consider their response and interact with the instrument. While it is possible that this data indicates some instructors believe this sort of diagnostic task to be of low importance or exceptionally simple, I have chosen to discard this data from my analysis as invalid.

Peer Debrief of Analysis.

In a qualitative analysis, the researcher is the instrument and brings his or her own experiences into the process. This represents a threat of bias if the analysis is completed by a single

individual, as there is no way to calibrate or check the accuracy of measurements collected by the instrument. However, performing a full analysis on the entire body of data is a costly proposition. To mitigate this situation, I conducted a peer debriefing of my own analysis (Glesne, 2006) as the final phase.

After I completed my own analysis, I made a copy of my qualitative analysis results using Dedoose (2015), but replaced the category labels with numbers. I then wrote and delivered my findings in the form of a presentation to one of my peers. This individual is an advanced doctoral student who had successfully completed his qualifying exams. He has experience with employing qualitative analysis methods and, while he has shown interest in the topic of my research, his own scholarly interests in organizational development are tangentially related. The presentation I delivered to my colleague began with an introduction to the study and the methods, as well as a summary of my quantitative results. I encouraged questions throughout.

Next, we selected a number at random and read and re-read each of its excerpts until my peer felt comfortable suggesting a label. We repeated this process, focusing on categories deep in the hierarchy, until my peer felt comfortable suggesting a label for parent categories.

The peer debriefing session reviewed a sample of eighteen of the fifty-three interpretive codes generated during analysis. During this session, three of the reviewed codes could not be fully evaluated because they required either a deep knowledge of the literature (e.g., they applied specialized terms) or a thorough, close read of the collected data (e.g., they referred to earlier events in the narrative or commentary by the instructor).

Of the remaining fifteen codes, fourteen of those supplied by the peer reviewer were substantially similar to those from the initial coding (see [Appendix L](#) for comparisons). This included the three high level codes intended to encompass many contributing threads.

One new code emerged as a result of the peer debriefing process and I followed up on this one with another pass at reviewing the corpus for applicability. This thread was labeled “instructors expect students to experience frustration” and, while clearly present, I view it as a part of a sub-theme addressed in [setting expectations and then measuring actions against them](#) and therefore already addressed.

Chapter 4 – Findings

In this section, I report on the results of the efforts described in the previous section. This begins with a review of the instructors' responses to the question regarding the plausibility and realism of the fictional narratives. Next, I present the quantitative findings or mathematical analyses of the diagnostic responses. Finally, I conclude with a presentation of the themes which emerged during qualitative analysis.

Plausibility

Phase 1 asked instructors to indicate whether they believed the individual weeks of the fictional narrative were plausible. Of the 845 plausibility responses from phase 1, 86.86% indicated that they were plausible. When viewed by instructor, the average plausibility percentage was 83.92% with 63.16% of instructors reporting no implausible weeks. More than one instructor echoed P278's initial response: "Hey! This is my scenario for my class! My classes that I teach" [P278, 2, 1]. This shows that the instructors found the narratives to be believable.

When instructors did report a week as implausible, they attributed this assessment primarily to the high levels of maturity and awareness represented within the narratives, such as when P201 indicated, "[U]ndergraduate students I have worked with usually are not this detailed in their writing" [P201, 1, 1]. P153 echoed that, stating, "[...] too much clarity in the prose while describing a very open ended process. Also, the punctuation used to convey the story seems beyond that of an undergraduate student" [P153, 1, 1]. Some instructors identified specific problematic word choices or details; P241 observed "[N]ote cards? No. All my first years record their notes in their phones" [P241, 1, 4]. In three instances, instructors identified continuity errors in text; three others identified issues indicating that a narrative was contrived. Between phases 1

and 2, I made some modifications to address specific issues raised in phase 1, but no material changes were necessary.

Overall, instructors accepted the reported team activities as representative of student experiences, even if they occasionally questioned the presentation style.

Instructor Diagnoses

Across all sixty-four valid, completed sessions, instructors diagnosed the narrative they read as *equal participation* 75% of the time, *group domination* 12.5% of the time, and *social loafing* 9.38% of the time (see Table 6). In two cases, or 3.13% of the time, instructors reported being unsure. When the results were separated by scenario, 95.65% concluded that a narrative in the equal participation scenario was equal participation (in one case, an instructor diagnosed equal participation as group domination), seemingly showing a high level of accuracy. However, the two dysfunctional narratives were also diagnosed as equal participation roughly two thirds of the time. Specifically, 66.67% diagnosed group domination as such and 60% diagnosed social loafing as social loafing (two instructors reviewing social loafing narratives responded with a diagnosis of *I don't know*). With the exception of the one instance of an equal participation narrative being diagnosed as group domination when instructors did diagnose a dysfunctional behavior, their decision agreed with the intent of the author. Furthermore, with only two I don't know responses, most instructors were willing to render a diagnosis.

Table 6
Overall diagnosis counts and percentages by narrative

Narrative		Equal participation	Group domination	I don't know	Social loafing	Grand Total
Equal	Count	22	1			23
Participation	% of Total	95.65%	4.35%			100%
Alex	Count	6				6
	% of Total	100%				100%
Anika	Count	7				7
	% of Total	100%				100%
Lionel	Count	3	1			4
	% of Total	75%	25%			100%
Natasha	Count	6				6
	% of Total	100%				100%
Group	Count	14	7			21
Domination	% of Total	66.67%	33.33%			100%
Anna	Count	3	2			5
	% of Total	60%	40%			100%
Jose	Count	5	1			6
	% of Total	83.33%	16.67%			100%
Kim	Count	3	2			5
	% of Total	60%	40%			100%
Sam	Count	3	2			5
	% of Total	60%	40%			100%
Social	Count	12		2	6	20
Loafing	% of Total	60%		10%	30%	100%
Hannah	Count	3			2	5
	% of Total	60%			40%	100%
Iain	Count	5			1	6
	% of Total	83.33%			16.67%	100%
John	Count	3		1	1	5
	% of Total	60%		20%	20%	100%
Marie	Count	1		1	2	4
	% of Total	25%		25%	50%	100%
Totals	Count	48	8	2	6	64
	% of Total	75%	12.5%	3.13%	9.38%	100%

Examining the data at the weekly level, a Kruskal-Wallis test (Chan & Walmsley, 1997)

calculated using R (R Core Team, 2014) significant χ^2 (2, N = 985) = 94.65, $p < .001$ indicates

that responses to different scenarios do represent distinct sources and that these distributions are

not attributable to random chance. Wilcoxon Signed-Rank Tests (de Winter & Dodou, 2010) indicated that the distribution of responses varied depending on the narrative the individual was reading: equal participation versus group domination ($W = 45814.5$, $p < .001$), equal participation versus social loafing ($W = 36212$, $p < .001$), and group domination versus social loafing ($W = 37251$, $p < .001$). Together, these results show that the sets of responses to each scenario are distinct from each other.

Table 7 shows the diagnostic responses by instructors when they were evaluating the group's behavior over the course of a single week rather than over the entire fourteen week semester. Equal participation still dominated here, but not as drastically, being diagnosed 47.92% of the time. At this level, instructors selected *I don't know* 9.34% of the time. Of these, 1 equal participation narrative and 1 social loafing narrative showed slight agreement while 2 social loafing narratives and one group domination narrative showed fair agreement amongst instructors.

Table 7
Instructor diagnostic responses of individual weeks of the narratives

Scenario	Equal participation	Ganging up on the task	Group domination	I don't know	Other	Social loafing	Grand Total
Equal Participation	212 (61.45%)	26 (7.54%)	48 (13.19%)	17 (4.93%)	10 (2.9%)	32 (9.28%)	345 (100%)
Group Domination	148 (48.05%)	10 (3.25%)	98 (31.82%)	15 (4.87%)	20 (6.49%)	17 (5.52%)	308 (100%)
Social Loafing	112 (33.73%)	6 (1.81%)	40 (12.05%)	60 (18.07%)	16 (4.82%)	98 (29.52%)	332 (100%)
Totals	472 (47.92%)	42 (4.26%)	186 (18.88%)	92 (9.34%)	46 (4.67%)	147 (14.92%)	985 (100%)

Twenty-five instructors reported having observed an *other* behavior at the weekly forty-six times (these twenty-five often reported other behaviors more than once), constituting 4.67% of the responses. The accompanying behavior labels offered little consistency and generally amounted to a brief summary of the week's events such as "summary of the presentation and then delegation to review the paper" [P193, 1,] or commentary on individuals like "[e]gocentrism - the author thinks s/he is always right" [P189, 1, 9]. In a few instances it was clear that instructors repeated their own *other* response across multiple weeks, but in no cases were these repeated either verbatim or in essence by more than one instructor.

Table 8 represents the Fleiss' Kappa results calculated using the R package "irr" (Gamer et al., 2012) including the overall conclusions. Five of the twelve narratives proved to be significant ($p < .05$). Using Landis and Koch's (1977, p. 165) guidelines to interpret the results which were significant, three showed fair agreement and two showed only slight agreement.

Table 8
Fleiss Kappa calculations of agreement

Scenario	Narrative	Kappa	P value	Interpretation
Equal participation	Alex (n=6)	-0.01	0.845	(Not significant)
	Natasha (n=6)	0.13	< 0.001	Slight
	Anika (n=7)	0.02	0.576	(Not significant)
	Lionel (n=5)	0.04	0.447	(Not significant)
Group domination	Anna (n=7)	0.02	< 0.401	(Not significant)
	Jose (n=6)	0.20	< 0.001	Fair
	Sam (n=6)	0.08	0.067	(Not Significant)
	Kim (n=6)	-0.01	0.750	(Not significant)
Social loafing	John (n=5)	0.13	0.002	Slight
	Marie (n=5)	-0.01	0.86	(Not significant)
	Hannah (n=6)	0.29	< 0.001	Fair
	Iain (n=6)	0.24	< 0.001	Fair

Themes in the Responses

With the quantitative analysis from the first half of this section as the backdrop, the second half presents the themes which emerged from my analysis of the qualitative data. Analysis using a constant comparative method yielded a total of 1034 excerpts, including 220 from phase 1 and 814 from phase 2. To each excerpt I applied one or more of the sixty-six codes which emerged representing ideas that could be used to respond to my research questions. Twelve of these codes were not directly applied to excerpts, but rather were used as categories to collect and organize sub-codes (see [Appendix M](#)). This resulted in 1635 code applications.

The average number of excerpts per participant in phase 1 was 2.97 while the average in phase 2 was 81.4. The overall average was 24.92, ranging from a minimum of zero to a maximum of 134. Each quote is labeled with the format “[Participant, phase, excerpt # from that instructor]” and Table F1 in [Appendix G](#) shows further detail regarding instructors and their quotes. In phase 2, where I spoke directly with participants, I guessed at their gender and this has been reflected

in the use of pronouns. For participants in phase 1, I randomly assigned genders to provide a smoother reading experience.

There were 17 distinct codes that fell into three major categories:

- What instructors noticed
- Strategies for diagnosing behavior
- Barriers to diagnosing behavior

A fourth theme focused on policies instructors employ for managing long-term group projects in their classrooms. Eleven distinct approaches were described.

What instructors noticed. As instructors performed their diagnoses of the group's state, they paid particular attention to shared versus individual behaviors, student roles and student intentions, shifts in power, student presence, signs of withdrawal, and, in a couple of cases, when gender appeared to be playing a role. Additionally, instructors frequently commented on elements of the instruction itself, ranging from questioning the objectives to criticizing the strategy of the instructor. In some cases, instructors were attuned to the same concerns, as with shared vs. individual behaviors (see Table 9). However, in other cases instructors seemed to focus on different elements in their scenarios. For example, while P66 and P278 addressed shifts in the power dynamic five and four times, respectively, it didn't come up at all with P286, P280, P279 and P259. Similarly, P66 and P281 discussed course objectives five and four times, respectively while this never came up at all with P259, P278, P280 and P284.

Table 9

Selected phase 2 code application counts

Applied code	P66	259	277	278	279	280	281	282	284	286
Shared vs. individual behaviors	11	3	2	7	13	9	5	11	10	12
Shift in power dynamic	5	0	1	4	0	0	2	1	1	0
Discussing objectives	4	0	1	0	1	0	5	1	0	2

Student intention. Student intention was a strong theme, with evidence in the commentary of all the instructors participating in the think-aloud, as well as a number of instances found in the voluntary comments from phase 1. This was noted when instructors evidenced hypothesizing about the motives driving a student's actions. In a few cases, this was based on comparisons with archetypal behaviors. P189 made this clear by stating, “[T]his is the classic ‘I’m worried about my grade, and if I have to, I’ll throw someone under the bus’ attitude you often see at the undergrad level” [P189, 1, 4]. In other cases, this represented the instructor reviewing the unique situation within the narrative and evaluating a character's actions. P284 stated, “Hannah came back and there was a legitimate reason” [P284, 2, 10], after learning Hannah had missed the previous meeting due to an injury.

Sometimes, an instructor directly speculated regarding student strategy. P279 indicated, “I think she and Anika both are concerned with Alex's weak writing so they don't want to assign part of the paper to him because he's not a good writer” [P279, 2, 39]. Other times, they were correcting their perceptions. P286 stated, “[S]o that means ... he contributed to the group project. I thought that he intentionally not doing it” [P286, 2, 32].

In live sessions, instructors often communicated their judgments and understanding of intention and characters' thoughts through verbal emphasis. For example, P281 emphasized “my” and “I” while reading aloud Natasha’s narrative [P281, 2, 49]:

Natasha's narrative: Ultimately we sort of settled on *my* plan

P281: Of course.

Natasha's narrative: and modified the outline Alex had put together to look more like what *I* was describing.

P281: That's not good.

He then rendered a judgement on the narrator's intent to dominate. Similarly, P284 commented, "Iain is more on the non-participatory standpoint. But then again, you have to take their word for it that it was true that something that came up" [P284, 2, 13], hinting at skepticism regarding the truth of Iain's explanation for his absence and pointed to waning dedication to the success of the project.

Shift in power dynamic. Another common type of observation was around shifts in the power dynamic within the group. This was clear in more than half of think-aloud sessions, but the most obvious instance was from P209, who wrote, "[G]roup storming around power and control. The 'freshmen' have realized that the 'sophomore' doesn't know everything. S/he apparently doesn't understand the shift in power dynamics" [P209, 1, 5]. P66 began noticing power shifts in the second week, with a significant uptick in activity during week 7 [P66, 2, 47]:

"[I]t's an interesting shift in sort of a domination perspective, where the—Anna is sort of the control freak, loud-mouth [...] but here you have her actually conforming to what Kim said. So if you take such a strong character and say: OK, I'm going to step off of my pedestal and agree that everyone is on the same page, shows me that now Kim has more power in this, sort of group dynamic, than Anna."

P66's observations regarding this shift and its ongoing evolution continued to be present over the next couple of weeks.

These observations of power shifts influenced the instructors' assessment of student skills and personalities. P281 commented, “[T]his person says 'no.' And, then ends up taking on that task themselves instead of delegating it out and making sure everyone had an equal part in trying to work through that sort of shortcoming. Um, so the person's a leader but is also not a good delegator” [P281, 2, 41].

Student roles and skills. Instructors noticed that students seemed to fill certain roles within the group. As P259 noted [P259, 2, 46]:

“So Alex was good at editing, so he did that part. This person who is doing a good job in presentation, so she—the person did it. And Lionel, even though he had a lack of experience collaborating, he pushed himself to do more participation. And this person also participated and volunteered to do things.”

Noticing this helped them to set expectations around individual contributions and keep everyone sorted. P277 clearly did this when, in the first week, he stated, “[...] description of everyone playing at least some kind of role, other than the quiet one and we'll just let that slide and see where that goes to. Some students take a while to get into their roles” [P277, 2, 3]. These observations most often accompanied observations of the group's power dynamic and leadership.

Shared vs. individual behaviors. In debrief, instructors frequently made note of whether behaviors were attributed to individuals or if they were shared by multiple group members. In trying to sort out possible dysfunction, P279 struggled because “[...] the group domination—this is not an individual” [P279, 2, 38]. Similarly, P278 had difficulty “[...] because none of the

choices had a descriptor where two of the people in the group are leading to put the work together” [P278, 2, 25]. While this often related to issues of power and leadership, P286 took this into account in his social loafing diagnosis: “I choose Social L. [...] Iain and a little bit of John, too” [P286, 2, 26].

When gender played a role. While not noted often, some instructors made note of gender when assessing distribution of assignments, interactions between students and treatment of one another. This was clearest in P241's description of the *other* behavior they saw: “[O]nly [K]im and [A]nna are actively participating. [T]he men are ok with letting the women do the ‘female’ thing and edit the paper” [P241, 1, 8].

Issues related to delivery of instruction. The instructors often commented on the decisions, actions or goals of the narrative's instructor or the design of the course itself. This frequently took the form of criticism and recommendations for remediation. P279 said “[I]f I was reading these weekly journals, at this point, as an instructor, I would be wanting to have [a] conversation with [one of the students]” [P279, 2, 20], indicating she thought an intervention of sorts was necessary. P280 was more overtly critical after reviewing elements of the narrative that indicated the instructor provided little feedback, responding with, “I hope I'm not that instructor” [P280, 2, 92]. P278 attributed some of the group issues to the course structure when she observed “[...] the layout of that group project is adding to the stress of this group” [P278, 2, 45], and P281 offered his own version of this recommendation: “[K]now when the dysfunction can happen and try to plan the activity to keep those in mind and how to overcome them” [P281, 2, 112].

Instructors often commented on the value of group work and the objectives of such a project, but had different ideas regarding the goals of such projects. Some, like P19 questioned, asked, “[Were] leadership skills and group skills instructional goals of the course?” [P19, 1, 8]. Others were confident that such skills must be course objectives; P281 said, “[O]ne of our goals in group projects is to have everyone have a sense of leadership. Or at least experience being sort of a leader in a team” [P281, 2, 51]. P281 further posited, “[P]eople with different skill levels can come together and learn off of each other” [P281, 2, 23]. Others seemed to take a more practical approach. P286 pointed out, “One of the elements is to keep the deadlines and with that limited timeframe” [P286, 2, 37]. P281 seemed to echo this in a later remark, stating, “If I was going to advise these students, I would remind them of the overall goal of the assignment and try to get them back on task” [P281, 2, 48].

P281 observed, “Most people don't know about the dysfunctions and really aren't conscious to them, and I think that's where more of the faculty commitment lies” [P281, 2, 114]. P280 stated this most succinctly: “When they get out into the [real world] and then they have an Iain or they have a Marie, they're going to have to figure out what to do” [P280, 2, 133].

Strategies for diagnosing behavior. Instructors in this study employed multiple distinct approaches or strategies as they strove to diagnose the group's behavior. They tended to employ multiple strategies in the course of each diagnosis, transitioning smoothly back and forth between approaches and seeming to choose them opportunistically as the data suggested. The approaches used were:

- Process of elimination
- Evaluating performance by presence of complaints

- Setting expectations and then measuring actions against them
- Weighing the significance of activities
- Referring to literature

The one constant was that these were employed against a backdrop of reference to the narrative. Instructors constantly told and retold the story, pulling in additional elements and validating them against their evolving picture of what was happening. In some cases, instructors seemed to arrive at a quick decision and then pull in and evaluate data to support that decision—only infrequently swaying from this initial reaction. P282 provides an example [P282, 2, 28]:

“We're getting into that ganging up on the task ... I don't think that we're to the point where the author is saying she's not—or she's going to avoid it, but she is getting to be overwhelmed with what she's doing. Her feelings are getting hurt because the group's not talking to her, but, like I said earlier, she's not alluding that touchy-feely-approachable-type thing. She's more of the dictator, if you will, so ... you know, I'm going to jump up and say maybe on this one it might be ganging up on the task because the other ones are just kind of saying: 'yeah, whatever' at this point. No argument. No [unintelligible] because they kind of feel like she's gonna' get her way at this point anyway?”

In other cases, instructors seemed to build up to their answer, as was the case with P278 [P278, 2, 11]:

“I'm thinking again, week 13 as they're getting ready for week 14, everybody's pitched in as much as they could be for the work that needed to be done in the paper. So, I don't know that there was an equal amount to be done by everybody, but everybody pitched in—everybody participated to get ready for it all. Equal participation. I think the amount

of work ebbs and flows and as long as people were participating throughout the semester, contributing, um, I think that—we'll stick with equal participation.”

Process of elimination. All instructors in phase 2 employed the classic test-taking strategy of process of elimination—when the instructor considers one or more behaviors for the purpose of removing them as candidates for the week under consideration. There was also evidence that many instructors in phase 1 did the same. P259 explained, “I arrived at that equal participation because it seems that everyone was involved. No one was loafing, and there was no one who was dominating the conversation and they all reached the consensus together” [P259, 2, 8].

Evaluating performance by presence of complaints. Instructors searched for signs of complaints from the narrator as an indicator of dysfunction. P280 explained this way [P280, 2, 99]:

“His lack of complaints—or her lack of complaints—um ... seem like, since the journal person I'm seeing through has been clear if they have felt that somebody hasn't been doing something or if somebody was arguing. The lack of complaints sounds like when they were practicing the presentation etc. it was pretty equal.”

While clear instances were few, I found evidence of this strategy being employed by four of the phase 2 instructors, and P183 attributed his decision to “the degree of dissatisfaction of other members” [P183, 1, 3].

Setting expectations and then measuring actions against them. Making and checking predictions in one form or another was an important strategy employed by all instructors. They

established a set of expectations regarding the events that were to come in the group and later compared with those predictions to further contextualize events and evaluate them.

Instructors frequently labeled or categorized students or otherwise made guesses about their growth trajectory. P279 wondered “if Alex is an [English as a second language] student because that—that could be, you know, a difficulty and I see that a lot” [P279, 2, 43]. Often they made direct references to their own past experiences, as P66 said, “I have a student like [Sam] [...] I don't know if he's ever joking or if he's ever serious ... we'll just go with class clown” [P66, 2, 2]. In a number of cases, this related to students enacting roles in a group. P277 noted “everyone playing at least some kind of role, other than the quiet one and we'll just let that slide and see where that goes to. Some students take a while to get into their roles” [P277, 2, 3]. These categories include the skillset observations I've described in the [Student roles and skills](#) section above, but go beyond to serve as a means of anticipating events.

P282 expressed concern for Anna and her group and made predictions about what was likely to happen: “[A]ll you're doing is devaluing him and deflating him and at some point he's gonna' say 'I'm done.' And they're gonna' be stuck pulling up somebody else's work” [P282, 2, 24].

Instructor evaluations of intent, engagement level and level of effort factored into these expectations and, ultimately, their predictions. P278 explained, “I've got to stick with SL, I think he's more doing the same behavior, he's kinda' like 'nah,' staying around as long as he feels like everyone else is in control and taking away no work that he's going to do outside” [P278, 2, 33]. Earlier, P278 paused for a bit because she was “trying to make sure that [she] felt each member was contributing, uh, to the best of their ability” [P278, 2, 27] indicating that skill level was factored into expectations.

Student growth and development also played a role as P282 made clear, “[Anna] thought she was a little higher and mightier than everybody else, but I think she kinda' came around and started giving them kudos on what they did, so I'm gonna' say overall equal participation” [P282, 2, 65]—a shift from group domination.

Instructors also drew upon their own past experiences to make predictions and evaluate group performance. Two instructors made it clear that they identified with characters depicted in the group. P66 identified with aspects of “Anna being a little bit OCD and—I get it! I'm like that, too! So I get it. Want to make sure everything's done well and done properly” [P66, 2, 30]. In other cases, they cited clear visions of what dysfunctions look like when choosing equal participation, as P280 dismissed social loafing with the assertion, “[A] real social loafer, probably, maybe would talk a lot at the first meeting, but really, once an SL becomes disinterested, they don't really contribute that much” [P280, 2, 130]. P66 noted her own surprise at how the group domination scenario deviated from her own vision of the dysfunction [P66, 2, 27]:

“As I read the point where Sam says: well I don't have enough time to do all this, I really expected her to demand that she help, and that her version of 'help' was 'I'll just do it and hand it to you.' So it was interesting to see that she took a step back and said, OK, Kim, you can step up and see what that looks like.”

P189 also indicated a rigid image of a particular group dysfunction which distracted them from the intended target [P189, 1, 8]:

“I am surprised that SL was your target behavior. I'm curious—was it the narrator who was engaging in this behavior? Thinking back, I can better see the point you were trying

to make. To me, a SL student would be disengaged from the very beginning—in other words, s/he would never volunteer to do anything ever; instead, s/he would spend meeting times on Facebook or texting or pretending to work, but not really doing anything substantive.”

P277 seemed to employ a variation by simulating what would have likely happened if alternative decisions had been made in an effort to evaluate the reported actions. He explained [P277, 2, 60]:

“Well, um it was pretty straightforward, I mean they had to actually do the presentation, everybody did their share and, um, there was one person who went over the final edits—that doesn't seem kind of unusual. I mean, I suppose they could have split it up and had everybody do it and then had one person coordinate the changes, but, um, I feel comfortable with the work that they've done and for one person to sort of do a little polishing, I still think that's pretty good for a group dynamic.”

He is the only instructor that reported using this strategy.

Weighing the significance of activities. All instructors made note of certain events and weighed their significance as they read and retold the story. They seemed to maintain a tally of these items as they determined their diagnoses.

For example, instructors made note of the absence of a student, either physically or just a lack of mention within a portion of the narrative. As P277 said, “[T]he red flag is that Anika is not physically present” [P277, 2, 16]. P281 said, “[T]here's also no sense of where Alex is in any of this [week's narrative], so I'm kinda' worried” [P281, 2, 88]. P286 explicitly noted the effects of one students' slacking, “I don't see any contributions from Iain and because of that, other people, like Marie and John, they're volunteering to do, like, extra work” [P286, 2, 32].

Instructors also made an attempt to evaluate the product of the students' efforts—either their aggregate effort or those of individuals. This was inferred by their narrators' report. They factored in whether students had completed the tasks assigned to them and the reported quality of their work. P183, in determining criteria for evaluation, suggested “perhaps something to do with whether the group's work is productive” [P183, 1, 3]—perhaps the end justifies the means?

These evaluations grew ever more complicated as time progressed because instructors also accounted for events that occurred over the entirety of the project. P277 noted “[S]he's taking the week off, but that is within reason if it's a one-time thing. Similar—different, but similar to, um, Anika [who skipped a meeting to visit her ill mother]” [P277, 2, 39].

Similarly, P286 grappled with the effects of past student actions when evaluating current inequities or problems when he said [P286, 2, 41]:

“In this specific week, they all seem to contribute to the group work. But the extra work this student and John have to do is actually a result of Iain's social loafing in previous weeks. But for this specific week, Iain was doing his responsibility to review the section of the presentation. So I'm not sure whether to choose social loafing or equal participation—let's go with social loafing.”

They also relied upon their own past diagnoses to inform later diagnoses—particularly the overall diagnosis. P282 calculated, “I gave more equal participation than I did group domination, so I'm gonna' say overall, the group did equal participation” [P282, 2, 62].

Recourse to literature. Instructors recalled literature and extant research with which they are familiar to inform their understanding of the group's state and expectations. The list of research topic areas mentioned was:

- Collaboration
- Group Dynamics
- Gender
- Original
- Brainstorming
- Types of conflict
- Bullying

It is notable that more than one instructor referred to Tuckman's (1965) group process sequence: forming, storming, norming and performing. Only one instructor referred directly to specific research and that was when she introduced the findings from a study that she had conducted. In all other cases, references were through terminology (references to Tuckman's phases of group development) or in a general sense to ground their observations as in the case of P280 who responded to the John's first week narrative by saying it "sounds true based on all the gender literature" [P280, 2, 9].

Barriers to diagnosing behavior. Instructor efforts to diagnose dysfunction were often frustrated by perceived impediments. These included limitations inherent in the construct and administration of the study itself, apparent cognitive strain imposed to an awareness that they were forced to rely upon a potentially biased perspective, and even a sense of optimism and hope for the students' success. This section will explain those impediments and how they manifest.

Not enough information. Instructors frequently indicated that they struggled with the limited set of information afforded them within this study. Some of this was simply a matter of the study's construction, which limited the perspective and visibility of the instructor by offering

only one student's journal. Many discussed a “need to triangulate” [P277, 2, 10], but P194 addressed this most directly [P194, 1, 1]:

“One has to be careful when accepting the subjectivity of one individual's self-report on group behavior. At this point, without collaborative reports, the characterization is more an estimate of this student’s opinion than the group's dynamic.”

As discussed in the section above, instructors looked for evidence of devaluation, but P282 noted it was “hard for [her] to tell if [the narrator was] condescending out loud or if she's condescending just in papers” [P282, 2, 19]. Other ambiguities also caused confusion for the instructors, as when P277 worked to figure out which of two opposing meanings represented the truth [P277, 2, 28]:

“They fought over who took one of the tricky parts—[did they] mean: I don't want it? Or no, no, you should take it, you're better? That's interesting, so—if I know why, that would be interesting to know.”

In a similar vein, many instructors expressed some skepticism in an untrustworthy narrator. Some echoed P172's comment, “[I]ts [sic] hard to determine how accurate his perceptions of the group dynamic are” [P172, 1, 3]. Others, like P209, took it a bit further by pointing out the nature of likely inaccuracies: “[S]tudents have a tendency to overvalue their own contributions unless they admit to social loafing. (which quite a few do)” [P209, 1, 3].

Finally, many instructors indicated that, while they saw some potential causes for concern, it was too early to make an actual determination because the project and the group were still young. In week 1, P284 observed, “I selected equal participation at this point because even though, from observation and the journal entry, we may see what you perceive to be dominant traits, but it just

could be more the fact that Iain was just more comfortable in the group process” [P284, 2, 3]. Naturally, this was only seen in the first few weeks of the course.

Reluctance to label as “dysfunctional.” Often instructors exhibited an unwillingness to assign one of the dysfunctional group behavior labels. Respondents tended to mark the group as *equal participation* if the group members were trying to pull together in spite of a social loafer or group dominator. P110 wrote, “Of course, while Anna was domineering clearly, its [sic] hard to say that the whole group didn't actively participate” [P110, 1, 14]. P280 echoed this, saying, “[E]xcept for that dominating piece ... it felt like they almost had EP” [P280, 2, 108].

Instructors also expressed a level of confidence in the likelihood that the students would resolve the dysfunction themselves or that the level of dysfunction was not yet problematic. In the face of Hannah's absence from the group meeting without any warning or communication, P176 pointed out, “Hannah might be sick, which could explain why she didn't show up and did not respond to her methods of communications” [P176, 1, 3]. P284 explained, “I usually don't, like pinpoint and say 'that person's going to be dominant' from the get-go” [P284, 2, 3]. Later on, P279 showed a similar hesitation to judge too soon, saying, “[S]ome may quickly choose the social loafing because Hannah was not there, but the reason has not been confirmed as to why she was not there” [P279, 2, 7].

In still other cases, instructors showed discomfort with the implications of assigning the negative connotations of the terms group domination and social loafing. P280 pondered [P280, 2, 184]:

“Is it SL? That term is pejorative, I mean it implies—it feels like loafing implies he is purposely being ... not so good, and we don't know if he is yet, although I could make a story up about him being grumpy.”

All of these factors contributed to a tendency to assign equal participation or, in some cases I don't know, to escape labeling groups with a dysfunction.

Experience with the construct of dysfunctional behaviors. Instructors indicated that it was difficult to identify the listed behaviors in the group narratives or that alternative behaviors applied. In many cases, instructors were clearly unfamiliar with some of the terminology or struggled to establish criteria for diagnosis, but sometimes they recognized aspects of multiple listed behaviors occurring or recognized unlisted patterns of behavior with which they were familiar.

Instructors often referred back to the group behavior definitions to check that they were applying them correctly. P286 re-read the definitions with each weekly diagnosis. Ganging up on the task confused many participants. P259 exemplified this common struggle, when she said, “[S]o, it's more like more people are doing—like, the other members are SL, I guess? [...] I'm just thinking aloud. [...] in my mind, I will interpret it as the other members are SL” [P259, 2, 2]. When questioned on policies employed in her own classroom, P284 responded, “I don't have any formal, official policy. I've never really ... probably have never really even seen a group policy” [P284, 2, 37].

P284 seemed to take more of a lifecycle view of group work “[n]ot so much a behavior, but which phase?” [P284, 2, 27] —earlier in the session, she referenced Tuckman's (1965) model of group formation.

Instructors often commented that multiple dynamics were at play and they struggled to tease them apart to establish a set of criteria for making a decision. P261 observed, “The author is dominating to some degree, but only Iaian[sic] is avoiding, and not at all points in the entry”

[P261, 1, 5], indicating that there was some amount of group domination and some social loafing going on—this was the label they offered for their diagnosis of other for the week. P183 made the issue even clearer, writing, “I’m unsure of the criteria I’m using to demarcate equal from dominating” [P183, 1, 3].

In fact, many times when the diagnosis was 'other,' the supplied label amounted to an overview of that group's activities for the week. It was primarily when pressed in the phase 2 sessions that actual alternative patterns emerged. These represented patterns that they saw frequently in their own teaching. The set of named behaviors is:

- Bullying: perhaps synonymous with *group domination*
- Grudge: when a member retains anger over past events (Perhaps this should be renamed “interpersonal conflict.”)
- Factionalization: when the group fractures and forms subgroups that may be in opposition
- Positive leadership/facilitation: when the group is clearly being led by a member in a constructive way

Lack of formal training on group facilitation. An important theme made clear during the post-diagnostic questions was that none of the instructors seemed to have received formal training in using this sort of group project for instruction. P279 stated this most clearly [P279, 2, 72]:

“When I first started doing [group projects], I didn't have, you know, I didn't know how to anticipate these problems, so they were much worse at the beginning, um, because I just kind of gave this group project and I kind of thought they'd figure it out.”

However, she was not alone. P278 also referred to learning how to achieve successful group projects through trial and error, and P284 indicated patterning her instruction on what she'd seen her peers do, but that she'd “never really seen a group policy” [P284, 2, 37]. In fact, this

researcher has not received any formal training in the employment of group projects for learning purposes even though I, too, have used them.

Limitations of study construct. There were a number of instances where flaws in the study itself or in its implementation presented barriers for instructors. As indicated above, instructors found the narratives to be plausible overall, but they were not perfect; those elements that did not ring true served as a distraction and a barrier to completion.

Because the narratives were designed to convey the perspective of a student, the narrator's gender was ambiguous, since it never needed mention. In communicating comments (either in text or verbally), the instructors often noted this. It is not clear that this materially affected the diagnosis, but even when they did not explicitly factor this in as part of their strategy, P280 showed that it interrupted her flow when she “went with the first guy's ideas—I mean not—the first person—we don't know if he's a guy or a woman” [P280, 2, 44].

Additionally, in phase 2, there were instances in which the researcher accidentally provided feedback to the instructor through body language or a slip of the tongue. P280 (who requested video for our session) pointed this out directly [P280, 2, 84]:

P280: I saw you nod, which may or may not be an agreement, but there's that.

Researcher: [laughter] I'm just trying to jot down—I wrote down, um, SL maybe, Iain, maybe—that was ...

P280: So, I'm going to say I don't know, even though I'm leaning towards SL. Um, but I just—your nod made me feel good about SL. It was funny, I watched you, yeah.

While this was not common, it did occur and sometimes had an effect when it came up.

Cognitive strain. While in some ways related to issues with the construct of the study, instructor comments during phase 2 showed that they experienced cognitive strain as they tried to track all the student activities, relationships, assignments and promises. This was evident from the number of times instructors referred back to the text, as well as in their comments, such as with P66 [P66, 2, 53]:

“Trying to figure out timeline. How do I figure out the original timeline when stuff was due? That original scenario. [Researcher directs instructor] So they had an assignment week 5 [researcher provides assistance] reference with summaries—this is the draft. OK. So there's something due next week. I was off by a week, I thought something was due this week.”

Instructors also seemed to struggle with having the group as the unit of analysis, rather than the individual. For example, after completing week one, P284 asked, “[W]hen I'm picking categories am I just trying to pinpoint the journal entry writer's ... or where I feel the group is as a whole?” [P284, 2, 5].

Finally, instructor comments made it clear that they either occasionally missed or disregarded details embedded within the narrative. As an example, in week 8 of the *group domination* scenario, three group members postponed the meeting time but neglected to mention this to Anna. The following interchange indicates that P66 assigned little or no import to the reschedule, or did not notice it [P66, 2, 64]:

P66: I think the Anna situation is external to the group dynamics, but I think it—

Researcher: —What do you mean “the Anna situation?”

P66: So, her packing up and leaving. This person noting that she was upset more than normal, and noticeably more than normal, so maybe there's an external situation that happened, and she's sort of bringing it into the group dynamics.

Policies for managing long-term group projects. When asked about the policies they employed in their own classrooms, instructors had much to offer. Many actively monitor their groups through observation of group interactions (face-to-face or online), reflection papers and peer assessment in an effort to form and maintain a picture of what is happening in the group. These monitoring efforts are generally made anonymous, but also very visible to impart a sense of accountability that allays student concerns. As P281 pointed out, “[A] lot of students complain about the loafing. That's the first complaint. They're always worried about how other people's grades are going to impact theirs, and so that's the main complaint I hear [...] I think the accountability helps to keep them on task a little bit more” [P281, 2, 105].

Instructors reported incorporating a variety of elements into their courses to support group work. These include training mechanisms such as presenting successful group work scenarios, sequencing of milestones, group contracts, pseudo-group work with group discussion but individual projects and grades, and even deliberate grouping for shared interests. Half of the instructors in phase 2 strongly recommended the incorporation of group time into class to accommodate diverse schedules and the many students who must work while in college.

Many indicated that they push groups to work out their issues on their own. P284 said, “I know some instructors say once the group process has started, you work it out on your own. For the most part, that's usually what I tell my students: work these issues out on your own” [P284, 2,

38]. However, her unofficial policy is, “[F]or the sake of education, I do evaluate case by case” [P284, 2, 39] —effectively avoiding being tied to a preset course of action.

However, sometimes the standard practices do not work and the instructors are consistently sympathetic. P281 noted that “once you say ‘Group Project,’ without knowing how it's gonna’ go through, the students seem to be freaking out, and going: ‘how do I do this? It never worked for me in the past’” [P281, 2, 9] and said he spent the first week just working to calm his students down. P66 put it a bit more bluntly [P66, 2, 128]:

“I get 'group work sucks' from the realistic perspective, you don't get to pick your members, you don't get to pick the dynamics, and sometimes you don't work well with the group members that you get assigned, so I'm very sympathetic to that point but also very realistic in saying: well, you still have to do it. You still have to do the assignment.”

Most of the instructors in phase 2 reported that they break up groups that could not manage to work out their issues.

Summary

The data showed that instructors most often evaluated the scenario participants as participating equally in the project depicted in the scenarios they reviewed – even when they were designed to represent dysfunctional behaviors. The narratives themselves were perceived to be plausible representations of student experiences. Responses indicated that the instructors read deeply into the scenarios to identify salient points and indicators of group health, critiquing not only student behaviors, but also course design and instructor supports provided. They subsequently employed this data in a variety of strategies they selected opportunistically. Instructor commentary and feedback indicated they faced a variety of impediments as they engaged in this task. Finally,

instructors made it clear that the issues of dysfunctional group behavior that constitute the subject of this study are ones they have grappled with in their teaching.

Chapter 5 – Conclusions

This study aimed to answer four research questions. In this section I will revisit them and how they are answered by the data collected. I will also discuss the implications both on future research and on practical application

To what extent can instructors distinguish healthy or dysfunctional collaborative learning groups, as represented by a fictional narrative account from one group member?

In my review of the performance over the course of a semester, instructors in this study diagnosed these fictional groups as *equal participation* 75% of the time. At the scenario level, while instructors perceived the equal participation group as such 95.65% of the time, they viewed *group domination* and *social loafing* groups as equal participation 66.67% and 60% of the time, respectively. At the individual weekly response level, the percentage of equal participation diagnoses dropped to 61.45% for the equal participation group, 48.05% for group domination and 33.73% for social loafing (see Table 6 in [Instructor Diagnoses](#)). In each case, equal participation was the most common. I must therefore conclude that, while instructors in this study did correctly diagnose equal participation, they were largely unable to distinguish the equal participation, or “healthy” scenario from the dysfunctional ones. Still, while instructors were highly consistent in diagnosing the equal participation group as such, they were less so for non-equal participation narratives; they diagnosed a problem of some sort one third (33.33%) of the time when faced with a group domination scenario and 30% of the time (one instructor said they did not know) when faced with social loafing.

To what extent can instructors distinguish different forms of collaborative group dysfunction, as represented by a fictional narrative account from one group member?

In light of the answer to the first question, the majority of instructors (63.41%) diagnosed dysfunctional groups as equal participation, so it is clear that they had difficulty discerning one from another. However, when instructors did diagnose a dysfunction, their diagnosis was consistent with the intent of the scenario. Overall, no instructor mistook a social loafing scenario for group domination or vice versa. At the individual weekly response level, as one would expect, there was variance in diagnoses from one week to the next, but even here, the highest-percentage diagnosis next to equal participation was the dysfunction that the scenario targeted. This suggests that, while most instructors assigned to dysfunctional groups diagnosed them as equal participation, when they did detect dysfunction, they saw a clear and consistent distinction between social loafing and group domination.

How do instructors explain their diagnoses of collaborative group dysfunction, as represented by a fictional narrative account from one group member?

The qualitative analysis shows that instructors in this study reported making note of a wide array of different features in the narratives they read, including the intent of group members, shifts in power dynamics, student roles, and differences in skills and gender. Instructors also frequently critiqued elements of the scenario related to the delivery of instruction and took this into account when diagnosing the group's behavior. Also, in accord with literature on the topic (Fuhriman et al., 1984; Naquin & Tynan, 2003), they worked to attribute actions to individual group members rather than to the the group itself—particularly negative (or dysfunctional) behaviors.

Instructors reported employing a variety of methods for explaining their diagnoses of collaborative group dysfunction. Instructors summarized the story to contextualize and evaluate

events. They then fed their observations into a variety of strategies aimed at diagnosing the group's behavior:

- They employed the classic test-taking strategy of systematically eliminating candidates that did not apply.
- They weighed the contributions of members against one another, accounting for events from previous weeks as well –sometimes these evaluations were negative if a member caused others to work harder or if their actions made others feel badly or warranted complaint.
- They referred to their own diagnoses from previous weeks as a shorthand for those past events.
- They used their experience to project likely future events as a means of setting expectations and evaluating the group's health. They later returned to these predictions to compare with and evaluate actual performance.
- They related their evaluations of events to literature with which they were familiar.

It must also be noted that instructors faced significant impediments to their efforts. In some cases, these barriers were imposed upon instructors by the study construct itself. For example, many noted that, while they were limited to a single group member's perspective in this study, in their own classrooms they would likely have perspectives from the rest of the group, their own observations and work products to evaluate. They struggled to maintain what they felt was an appropriate perspective while also keeping track of multiple events and details of a class that they were not delivering and had no hand in designing. Instructors also frequently evidenced reasoning from experience while performing the task, which further increased cognitive strain in dealing with unfamiliar terms.

A final barrier seemed to be self-imposed in the form of a reluctance to label groups with terms that carry a negative connotation (see [Reluctance to label as “dysfunctional”](#)). In some cases, this optimism originated in their own past experiences with groups that resolved early issues (see [Setting expectations and then measuring actions against them](#)). In all cases, however, it was clear that the instructors take their roles in helping their students to grow and develop skills very seriously and they avoided stepping in to solve group problems if they felt there was a possibility that the students could resolve it themselves and some seemed to see diagnosing a problem as tantamount to throwing in the towel and giving up the hope that the students could still prevail.

To what extent is the approach of instructors to the diagnosis of collaborative group dysfunction as represented by a fictional narrative account from one group member consistent among instructors?

When statistically significant, the Fleiss' Kappa indicated that instructors in this study generally exhibited slight to fair agreement between one another when diagnosing group behaviors.

Furthermore, it seems that instructors were attuned to and noticed different aspects of the group's behavior and, while some strategies (such as *process of elimination*) were more common than others, instructors applied strategies as they saw an opportunity to do so rather than according to any sort of formula. The combination of these factors indicates that, while many instructors within the sample shared similar strategies and all applied them as situations permitted, each instructor brought their own unique perspective to the task, recognized different elements as salient and did not consistently apply the same set of strategies. In short, their approaches were unique, but commonalities existed.

Discussion

It is interesting to note that, while some instructors made reference to familiarity with relevant literature, there were strong indications that many instructors using long-term, small-group projects have had no formal training on managing small groups of this sort. As a result, each instructor performed their own trials and derived lessons from the errors they experienced in their own classrooms. The policies which they ultimately employ, while not identical, do share many similarities and common approaches—implying that many students may be suffering through unnecessary semesters of inexperience as new instructors reinvent policies as they start out. It is possible that this contributes to the instructor perception that students share a common view that “group work sucks” [P66, 2, 128]—an attitude likely to interfere with a student’s motivation to learn. In our efforts to benefit from collaboration and prepare our students for life beyond graduation, we are actually teaching our charges that collaboration is something to be dreaded.

It was clearly difficult for instructors to tease apart and evaluate the different degrees of behaviors evident in the narratives presented. In some cases this was due to the complexity of the scenarios overall, but it also seems that instructors spent a fair amount of time establishing their own criteria for making a determination. Particularly difficult was the distinction between leadership and domination: if one student is clearly leading the group, does this mean the group is being dominated? Where are the lines drawn? This was exacerbated by some instructors seeing themselves in the participants (see [Setting expectations and then measuring actions against them](#)). It is logical to suggest that many of those with the drive and motivation necessary to earn the Ph.D. that serves as the primary criteria for teaching in higher education, are likely to identify with Anna, the group dominator. This may represent a bias against diagnosing group domination.

These distinctions are often subtle and some behaviors are interrelated with blurred boundaries between them. I had a difficult time identifying distinct behaviors from the literature, finding instead many interrelationships, such as with *leave it to George* and *sucker effect*; they begin identically before they branch apart and become distinct. Furthermore, what would distinguish social loafing from sucker effect? Similarly, some of the terminology (particularly the behavior *ganging up on the task*) was unfamiliar to the instructors, and the naming was clearly confusing—both P66 and P259 questioned it directly and initially spent time establishing their own working definitions. While instructors quickly understood group domination and social loafing, and evidenced preconceived visions of the behaviors, ganging up on the task often posed a problem and when they identified alternative patterns (using the *other* option), the labels they supplied offered no consistency between instructors and were more often a description of what the instructor perceived to be salient events (see [Instructor Diagnoses](#)). This may imply that instructors lack a common vocabulary for referring to dysfunction in group work; this must discourage instructors from seeking assistance (either from literature or fellow instructors) when they do run into such problems. This may contribute to the observed tendency to rely upon trial and error when designing and implementing their own classroom policies.

Instructors in this study alluded to multiple potential reasons for using this sort of group project, but some gave no indication as to the value they expected to derive from it (see [Issues related to delivery of instruction](#)). Some instructors spoke of the development of leadership skills and the ability to work as members of teams. Others implied this by referring to the *real world* in which students would have to work on teams. However, some seemed to view the successful rendering of a work product (the likely point of evaluation in the real world) as the end itself. This difference in perspective would seem to have an effect on how one evaluates and manages group

performance. It also seems important for students to be aware of this perspective, as it likely constitutes a course objective.

One concern that was virtually absent from discussion of group-management techniques and group dysfunction was the effects of group dysfunction on the long-term goals of learning. It was touched upon in my conversations with P286 when I pressed for information on an example he presented, but even this was minimal. Instructors were concerned with balancing out the weight or value of activities—a sense of fairness. Other instructors speculated on the objectives for a course employing such a method and whether group skills were included in them. However, instructors did not talk about effects of group projects on the primary content of the course. This was also reflected in the confusion over the course's goals and whether group skills were to be counted among them. Interestingly, the literature is thin when it comes to discussion of the effects of group dysfunction on learning outcomes (see [The effects of dysfunctional group behaviors](#)). This despite the logical conclusion that loafers and dominated group members are likely not getting sufficient practice to develop the intended skills.

Practical implications

The findings of this study indicate that our instructors have a difficult time detecting dysfunctional group behaviors even when they are focused on the task. This means that when (not if) our students find themselves experiencing collaborative scenarios which will have a negative effect on their experience, a negative effect on their attitude towards group work and which may negatively affect their success at mastering the content, these problems will likely go undetected even by instructors with the best of intentions. There are, however, a few steps we can take even today to mitigate this state of affairs.

When we embark upon the delivery of content using long-term collaborative group projects, we should familiarize ourselves with the available literature on the topic. While this alone may not significantly improve our ability to accurately spot these behaviors in the wild, it will enable us to communicate using a common vocabulary when we do. This would also help us to identify and collaborate with colleagues that have relevant experience. It may also open some instructors' eyes to the prevalence of group problems and make us more sensitive to the plight of our students. This is important because the data indicates that we are unlikely to recognize these behaviors even when we are looking right at them. Realistically, though, requiring a full review of the literature on group work is not a viable option for most of our instructors as they have other heavy demands upon their time and this is likely quite far afield of their primary areas of interest, expertise, and practice. Such a requirement would likely have the effect of stifling the use of group work in higher education, which would constitute a disservice to both instructors and students – both of whom can benefit from such efforts. Fortunately, such a stricture is not necessary.

A valuable initial step would be for an instructor to acknowledge the fact that dysfunction does often occur and to familiarize themselves with the set of dysfunctional behaviors catalogued in [Appendix C](#). These two efforts alone would help instructors to recognize the problems their students face and enable them to discuss group work problems with colleagues in an effort to seek resolution.

Additionally, instructors choosing to use this method, should make sure the collaborative activities are adequately supported by the structure of the course itself. Once again, this recommendation need not result in the requirement of a massive (and intimidating) effort on the part of our instructors. Instructors should still focus their instructional efforts primarily on the

area of their expertise but be sure to consider and communicate why they've selected the methods they have (e.g., to more accurately model authentic engagement with the content or to allow for increasingly complex projects). This thinking should be reflected in the learning and performance objectives of the course itself.

Including objectives around effective collaboration and model group citizenship will cause us not only to set more comprehensive expectations for our students, but also serve to lay the groundwork for designing and implementing appropriate assessments in support of those expectations. These assessments would ideally include some measure of both formative and summative feedback – the latter to include, but not be limited to impact on student grades. This is crucial to helping our students to develop the skills they will need to succeed beyond the classroom.

Those instructional consultants and designers among us would benefit their clients by imparting the same advice and incorporate it into their own materials, should they use long-term collaborative group projects in their products. Perhaps this may include job aids or other performance support mechanisms to introduce the catalogue of dysfunctional behaviors and offer model learning and performance objectives for inclusion in course syllabi. It may also be valuable to establish support forums for such instructors to discuss what they are experiencing and to seek help in managing them. Such forums would help to establish a shared vocabulary for common problems and establish a measure of consistency regarding instructor expectations and approaches.

Next Steps

The results of this study have a number of implications for future follow-up. These include recommendations both for future research and practice.

Future enhancements. The results of this exploratory study present a number of questions that might be resolved by slight tweaks in replication studies. For example, the labels supplied for the behaviors under consideration in this study may have interfered with instructor diagnoses (see [Experience with the construct of dysfunctional behaviors](#)). Specifically, ganging up on the task may have posed a greater challenge in part because it depicted a state achieved through a sequence of events rather than simply a state independent of events (like the other behavior options). It also seems as though the wording of the label confused instructors, because the target of “ganging up on” is usually an individual.

Similarly, social loafing and group domination connote a negative value judgement, while equal participation may imply more of an objective calculation (see [Reluctance to label as “dysfunctional”](#)). In a future iteration, perhaps equal participation should be relabeled as *healthy operation* or something similar to help instructors to relate the behaviors to one another.

To address instructors’ concern regarding their limited perspective, a future study could investigate options for providing access to the journals of all four group members for review each week. However, this carries concerns regarding the significant increase in the time required of participants as well as the cognitive strain which clearly affected instructors in this study where they only read from one perspective. Additionally, such a study would want to control for possible differences due to the sequence in which instructors review narratives, but such factors could be addressed with a thoughtful interface design and study construction.

Finally, while participants were instructed to focus on evaluating the group's process, and limited information about the product was made available, instructors frequently tried to factor the product (and its completion) into their diagnoses. It may be valuable to steer instructors toward evaluation of the group interactions and away from evaluation of the products. This may be achieved by letting participants know at the outset that each group does complete the requirements for the course—regardless of whether their process is healthy.

Future directions. While this study does include instructors who deliver content in at least nineteen distinct topic areas, those teaching “education” represented more than half of the sample. Additionally, my recruitment activities focused on organizations that support educational researchers, it is likely that the perspectives and approaches may not represent the full range of perspectives available. Future iterations of this research might benefit from a focus on other fields where students and professionals are known to use group work extensively, such as business, engineering, and medicine. As there is no evidence that my participants drew upon methods derived from any other fields, it is possible that these have developed independently with their own strategies for navigating these and other problems. As such, they represent opportunities for cross-pollination. Alternatively, it could be that collaborative work is inherently different in one or more of these fields and understanding these differences may offer value. These results may enable us to understand different approaches and distill a set of best practices and/or better understand the respective fields.

No instructors mentioned any effects, attributable to group dysfunction, on the students' ability to meet the learning goals of the course; a review of the literature implies negative consequences for the learners, but few specifics (see [The effects of dysfunctional group behaviors.](#)). It is logical that, if students are not contributing equally to the completion of the project, they are not all

practicing the intended skills and their development will suffer. However, future research should investigate whether and to what extent these hypothesized effects exist.

As there is consensus that dysfunction should be avoided and/or corrected (even if only to avoid the discomfort of students and reduce instructor time devoted to addressing such situations), we should develop mechanisms for doing so. First steps along these lines would include the development of a framework for the review and evaluation of group process so that evaluators know what they should be attending to. It would also be valuable to develop a taxonomy of group dysfunctions that represents the relationships between different dysfunctions. This could help instructors mitigate the prevalent issue that arose within this study, whereby instructors recognized degrees of multiple behaviors and had trouble deciding on a single one.

Instructors at the undergraduate level could benefit from formal training in the conduct of long-term collaborative group projects. Research suggests that such projects offer unique value to students; yet, of the 286 instructors who showed sufficient interest in participating to read the information and offer consent, only eighty-four of those ultimately met the criteria of having actually used the method two or more times. Furthermore, the instructors participating in this study evidenced reasoning from experience, implying little to no formal training with the method that they were using in their classrooms. Additionally, instructors referred to a sense that group projects are perceived by students to be stressful—this could perhaps be reduced if our instructors had more knowledge and support mechanisms.

The instructors in this study offered up numerous strategies for managing group projects and dealing with dysfunction. Some employed methods for avoiding these problems through careful group planning and structuring, others suggested forcing the students to work it out themselves

and some imposed instructor solutions – often times instructors used their published policies (or lack thereof) to give the flexibility to choose the approach they believe will work best for the situation. This study shows that at least some instructors seem to avoid interfering with the expectation that they will see their students resolve their own difficulties figuring out how to do so in the process (see [Reluctance to label as “dysfunctional.”](#)).

However, if such collaborative group projects are indeed increasingly prevalent (Davis & Miller, 1996), then this is not adequate to prepare our students for what lies ahead of them. What is missing is a deliberate effort to empower students with the skills necessary to recognize these problems when they experience them and effective strategies for working them out when they crop up. While educating our instructors on successful collaborative group management is a necessary first step, it is not sufficient to prepare our charges. We must develop methods to impart these skills to our students. Benne and Sheats (1948) indicated some success in their efforts to educate future group members.

Finally, while it is tempting to race ahead to the development of solutions (as I attempted to do), we must be thorough in our analysis to be sure we fully understand the problem space. In this case, dysfunctional behaviors clearly do exist and affect students’ classroom experience, often leading to pleas for assistance from the instructors. However, we lack an understanding of the effects such behaviors may have on the learning process, learning and evaluation outcomes and transfer to future performance. As a result, the instructor’s responsibility and goals with respect to attempting to address the problem are also unclear. Without sufficient understanding of the problem space, the likelihood that the developed solution will be successful in supporting instructor performance is low.

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Appendix A: Demographics questions

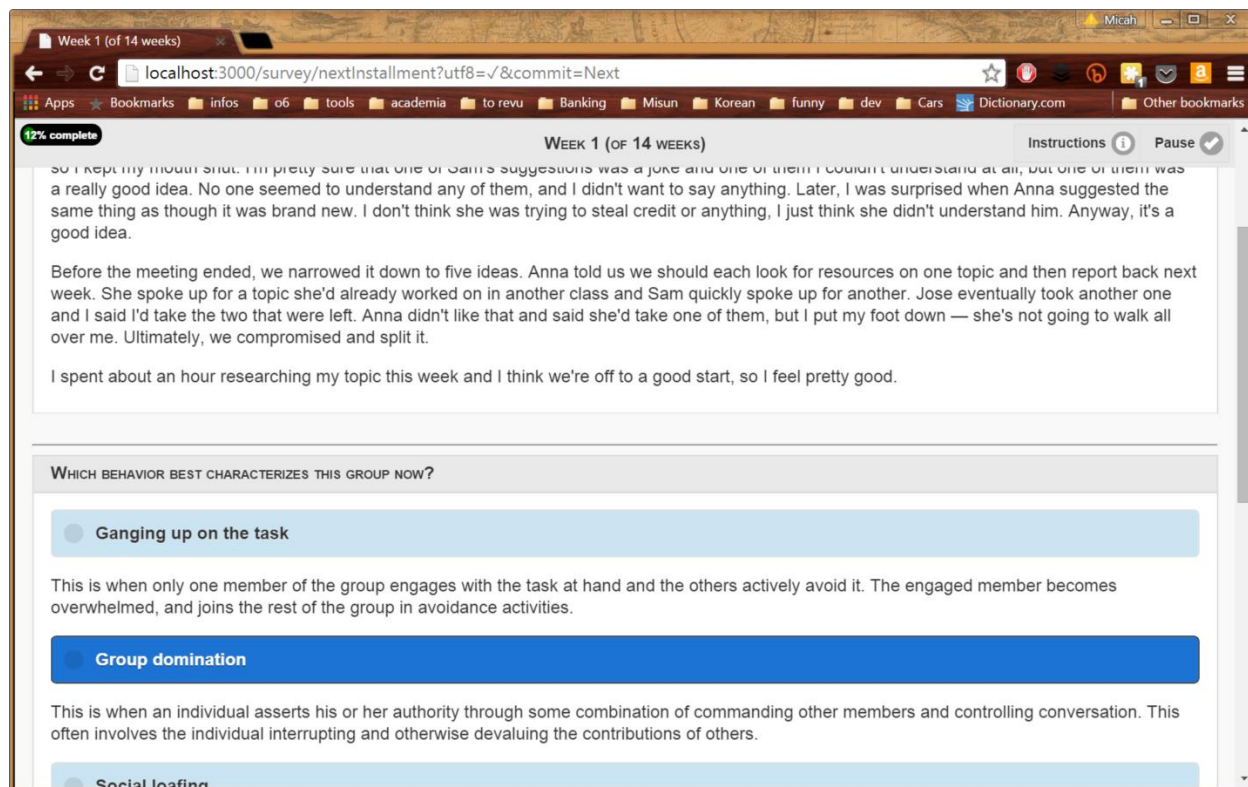
We are conducting this study to look at long-term small group projects (between three and five members) lasting eight weeks or more.

1. Have you used long-term small group projects in teaching undergraduate students?
2. How many times have you used long-term group projects with undergraduate students?

To help us characterize our participants, please answer the following 2 questions:

3. In which state is your university, college or institution located?
<50 United States + “I do not live in the United States” + “I prefer not to answer”>
4. How is the content you deliver in this fashion classified (i.e. what is the CIP code)?
<48 top level Classification of Instructional Program codes (from <http://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55>) + “Other” + “I prefer not to answer”>

Appendix B: Web-based instrument screenshot



Week 1 (of 14 weeks)

localhost:3000/survey/nextInstallation?utf8=✓&commit=Next

12% complete WEEK 1 (OF 14 WEEKS) Instructions Pause

so I kept my mouth shut. I'm pretty sure that one of Sam's suggestions was a joke and one of them I couldn't understand at all, but one of them was a really good idea. No one seemed to understand any of them, and I didn't want to say anything. Later, I was surprised when Anna suggested the same thing as though it was brand new. I don't think she was trying to steal credit or anything, I just think she didn't understand him. Anyway, it's a good idea.

Before the meeting ended, we narrowed it down to five ideas. Anna told us we should each look for resources on one topic and then report back next week. She spoke up for a topic she'd already worked on in another class and Sam quickly spoke up for another. Jose eventually took another one and I said I'd take the two that were left. Anna didn't like that and said she'd take one of them, but I put my foot down — she's not going to walk all over me. Ultimately, we compromised and split it.

I spent about an hour researching my topic this week and I think we're off to a good start, so I feel pretty good.

WHICH BEHAVIOR BEST CHARACTERIZES THIS GROUP NOW?

Ganging up on the task

This is when only one member of the group engages with the task at hand and the others actively avoid it. The engaged member becomes overwhelmed, and joins the rest of the group in avoidance activities.

Group domination

This is when an individual asserts his or her authority through some combination of commanding other members and controlling conversation. This often involves the individual interrupting and otherwise devaluing the contributions of others.

Social loafing

Appendix C: Dysfunctional Group Behavior Summary

- **Ganging up on the task** – when the enthusiasm of the minority is dampened by concern for being the only contributors. Efforts turn to task avoidance.
- **Group domination** – when an individual asserts his or her authority through some combination of commanding other members and controlling conversation. This often involves the individual interrupting and otherwise devaluing the contributions of others.
- **Groupthink** – the group pursues a course of action because it is perceived to be mutually agreeable even if some members have significant doubts.
- **Farrago** – one member becomes the focus of group attention for non-productive reasons while the group response inadvertently reinforces the bad behavior.
- **Social loafing** – one member of the group does not contribute his effort, forcing the other group members to do more than their fair share.
- **Sucker effect** – a skilled group member perceives herself to be unfairly burdened and stops participating to avoid being exploited.
- **Leave it to George** – a skilled group member is asked to do more than his fair share and group mates contribute (and learn) little as a result.
- **Rich get richer** – high status individuals dominate group activities resulting in increased opportunities for them and decreased benefits for others.
- **Division of labor** – members strictly distribute tasks based on task type and playing to existing strengths and hindering development of new ones.

- **Inappropriate dependence upon authority** – members rely upon the instructor for help rather than group mates, thereby missing out on opportunities to develop and practice desired skills.
- **Personal conflict** – disagreements between group members that do not relate to the group tasks are disruptive to group work and offer no compensating benefit.

Appendix D: Phase 2 Introduction Script

[Introduction]

“Thank you for agreeing to participate in this study. I expect this to take about 30 minutes and, with your permission, I’d like to audio-record this session – is that OK?”

“During this session, I will ask you to read through a fictional narrative intended to represent the reflective journal of a student engaged in a semester-long group project. After you read each entry, you will be asked to diagnose the group’s condition before moving to the next week.

“In this phase of my study I am trying to understand how instructors perform diagnoses and therefore I am more interested in how you arrive at your decisions than in the diagnosis itself. Therefore, the system will prompt you to verbally answer a question after each diagnostic decision you make. I will likely follow up with other questions after you respond.

“During the session, I will be happy to answer any technical questions you may have but, as the experience is intended to be self-contained, I am unable to answer questions regarding the narrative itself.

“Do you have any questions at this time?”

Appendix E: Phase 2 weekly follow-up questions

How did you arrive at your diagnosis?

What factors made your diagnosis particularly difficult this week?

What elements most influenced this week's diagnosis?

What events or actions most heavily contributed to your diagnosis this week?

[If Social Loafing or Group Domination was selected]

Who do you think is [social loafing/dominating the group] and please explain why you think so?

Appendix F: Phase 2 Concluding Questions

[Conclusion]

Have you encountered group problems in your classrooms?

How have you handled those problems?

Do you have a policy or set of policies that you employ with respect to group problems in your classrooms?

Appendix G: Index of Instructor Quotes

Table F1

Instructor contributions to qualitative findings by phase and index of quoted excerpts

Instructor	Phase 1 Excerpts	Phase 2 Excerpts	Total Excerpts	Excerpts quoted	Pages
P8	2		2	0	
P11	5		5	0	
P13	1		1	0	
P17	0		0	0	
P18	3		3	0	
P19	8		8	1	74
P21	0		0	0	
P22	2		2	0	
P24	1		1	0	
P26	2		2	0	
P37	1		1	0	
P42	0		0	0	
P43	2		2	0	
P44	0		0	0	
P48	3		3	0	
P50	1		1	0	
P58	0		0	0	
P66	0	129	129	7	71, 77, 78, 87, 89, 95
P70	0		0	0	
P71	0		0	0	
P72	1		1	0	
P77	3		3	0	
P78	6		6	0	
P79	2		2	0	
P87	4		4	0	
P88	0		0	0	
P94	0		0	0	
P104	0		0	0	
P109	0		0	0	
P110	20		20	1	83
P113	1		1	0	
P118	4		4	0	
P127	0		0	0	
P140	0		0	0	
P145	1		1	0	
P153	2		2	1	63
P168	4		4	0	
P169	14		14	0	

P172	3		3	1	82
P176	26		26	1	83
P177	3		3	0	
P178	0		0	0	
P180	5		5	0	
P183	4		4	3	76, 80, 85
P187	0		0	0	
P189	9		9	3	67, 70, 78
P193	2		2	1	67
P194	4		4	1	82
P199	0		0	0	
P200	6		6	0	
P201	1		1	1	63
P209	16		16	2	71, 82
P216	8		8	0	
P217	5		5	0	
P218	1		1	0	
P223	3		3	0	
P226	0		0	0	
P230	2		2	0	
P236	0		0	0	
P238	2		2	0	
P241	8		8	2	63, 73
P242	0		0	0	
P245	2		2	0	
P246	0		0	0	
P252	1		1	0	
P253	0		0	0	
P256	0		0	0	
P259	1	52	53	3	72, 76, 84
P261	8		8	1	84
P262	1		1	0	
P263	0		0	0	
P268	2		2	0	
P275	4		4	0	
P276	0		0	0	
P277		69	69	6	72, 77, 79, 80, 82
P278		60	60	7	63, 72, 73, 75, 77
P279		84	84	6	70, 72, 73, 77, 83, 85
P280		134	134	9	73, 74, 76, 78, 81, 83, 86
P281		119	119	10	70, 72, 73, 74, 79, 88, 89
P282		70	70	5	75, 77, 80, 82
P284		44	44	9	70, 71, 82, 83, 84, 85, 87, 88, 89

P286		53	53	5	70, 73, 74, 79, 80
Total	220	814	1034	86	
Average	2.97	81.40	24.92	2.07	

Appendix H: Class scenario

Students in this class are working on a research paper in groups of four, with three other students they've not worked with before. They will have 14 weeks to complete the paper.

The first assignment, due in week 5, is to submit the group's selected paper topic and a preliminary list of references with summaries. In week 9, students will turn in a rough draft. Week 13 will see each group making a formal presentation of their work to the entire class and the final paper will be delivered to the instructor by the end of week 14.

Each group is expected to meet and work on this project outside of class, and it is recommended that they schedule recurring meetings. Finally, each student is required to maintain a weekly reflective journal detailing every member's contributions so the instructor can understand how the group works together.

Appendix I: Equal participation narratives

Week **Alex**

1 In group time, we began by setting up weekly team meetings. My group seems to be nice, and Anika and I shared one of our big lecture courses last semester. Lionel says he just transferred into this school. The project is pretty big and fairly open-ended, so we brainstormed topic ideas for the rest of the time.

Anika was pretty quiet - maybe she suggested an idea or two. Everyone else seemed to have a lot to say, though. Natasha's ideas almost always made me laugh. She seems to be working hard to get outside the box and mostly she did it. This meant that many of her ideas weren't really useable, but they were fun and often they helped me to come up with other ideas, too. Toward the end of our meeting, Lionel noticed that no one was taking notes, so we recounted the ideas we could remember while he wrote them down and we discussed those 14 ideas.

Before the meeting ended, we crossed off the ones that didn't seem to work (this got rid of most of Natasha's) and ultimately narrowed it down to six. I recommended we each look for resources on all the topics to get familiar with them. Next week, we will report back and select a topic. Everyone agreed with this, so we had a plan.

After searching for about half an hour, it was pretty clear that only two of the topics really work for this project, so I focused on those. I figure that if we are all working on this independently, we are likely to come up with many of the same materials, so I tried not to spend too much time on the ones I found easily, but rather to dig deeper instead.

- 2 Anika found a lot of materials for one of the topics that I had a rough time with, but Lionel and Natasha also focused on the same two as me. We ended up with a lot of duplication, but at least we all know those topics. When we dug into what Anika found for the third topic, I couldn't see how we would be able to use much of it - the research mostly just had mentions of what we needed. Even Anika seemed to mostly dismiss the topic, and our discussion quickly centered on our most promising two topics.

There was a lot of discussion about which to choose - everyone had an opinion. Then Natasha suggested that we try to combine them. We wasted about ten minutes trying to see if we could make that work, but ultimately we couldn't and wound up back where we started. Our first vote was split down the middle, so I decided to make a list of pros and cons. I *may* have conveniently skewed the list in favor of my preference, but either way, our next vote was unanimous. Alex immediately pointed out that the other topic, although more exciting on the surface, would have probably been much more complicated and difficult.

The obvious next step was to find more materials on our selected topic, so we figured out the major subtopics and divided them amongst ourselves. We decided everyone would return next week with summaries of what they'd found to make it easier for the group to get moving quickly. To make sure we didn't wind up with a million competing summaries for the many duplicate materials, I split up the materials we'd already got among us.

I found some more materials and then spent about half an hour writing those summaries. The project would be big, but it is pretty straightforward so far.

- 3 During our meeting, we began sorting through the materials. Lionel's and Natasha's materials were in good shape. At one point, Natasha misread one of Lionel's summaries and made everyone laugh, but it was a pretty lucky mistake. In the ensuing conversation, a whole new light was shone on the topic. I'm not sure if that's what Natasha intended, but if so, it was brilliant.

I guess I should have spent more time writing because no one understood what I wrote. I'm not used to working in groups, and I guess I forget to explain everything. I just wrote down my observations (which, in this case, I could have used to write my own paper), but it wasn't complete and I had to explain it for the rest of the group. They did like my observations, though! I told them I'd rework them for next week.

Anika's summaries, on the other hand, were just a sentence or two each. Initially, she seemed to think they would be useful to us. After some awkward questions, I asked her point blank if she'd prefer to use Natasha's summaries or her own to write the paper, and she understood. The question was a bit blunt, but if Anika was offended, she didn't show it. I suspect it helped that we all had things to do to improve our work for next week.

I restructured my summaries this week to look more like summaries than my own notes. When I was done, I asked my roommate to take a look, and he had a few good questions that I subsequently addressed. All told, it took me about an hour and forty-five minutes.

- 4 Lionel was a bit late to the meeting this week, but Anika wasn't there at all. She hadn't been in class and no one had heard anything from her, so we weren't sure what was going on.

When it looked like she wouldn't be coming, we began working through my updated materials. Lionel and Natasha were both much happier this time. Lionel pointed out that they could use some editing, but that they were much improved. He made a point of saying he really liked some of the observations I'd made. He volunteered to try to redo Anika's work and assemble what we had for the assignment due next week, but Natasha said she'd work on Anika's part and get it to him so he could include them. She said she didn't want him overloaded. She also asked me to put together a basic outline of what the paper should look like. What a smart idea!

Putting together the outline didn't really take a whole lot of time.

- 5 Lionel turned in our assignment this week in class and Anika was there, too. It seems she'd had to go home in a rush because her mother went to the hospital, but she had done her summaries and got them to Lionel in time for him to include them in what he turned in. Our instructor gave us some time to meet as a group at the end of class, and we spent the time looking at my outline. Lionel seemed to be satisfied with it, but Anika and Natasha weren't. I wasn't really sure what they didn't like because we didn't have much time to get into it, but I tried to make some changes that evening.

At our meeting, it took a while to really understand where we weren't connecting. I thought the two of them were looking for me to make some changes to what I had, but it turned out they had completely different ideas of where this was going - from each other as well as from me! Lionel seemed to be confused and stayed out of our discussion. I think he figured it was all a simple misunderstanding that'd get worked out quickly, but he managed to be very involved in the conversation because his face is very expressive. It was clear that he was being swayed by Natasha. So was I, for that matter. After about half an hour, we modified the outline to look more like what Natasha was describing. Even Anika reluctantly agreed that it was probably the right way to go.

With the outline settled, Anika suggested we split the outline up into quarters and each write one for next week. Lionel spoke up quickly for the second section and I took the third because I didn't want to write the introduction or the conclusion. Fortunately, Natasha took the former and Anika took the latter.

It took me about two hours to write my draft of the paper because I just couldn't seem to make everything work properly. I finally stopped when I had *something*, but it's hardly my best work. It just doesn't seem to all fit properly.

6 It seems that no one was really able to make the pieces work quite right, so we had to rethink our approach. I had a feeling Anika would bring up her idea from last week, and she did. Fortunately, I'd thought a lot about that when I ran into trouble writing and was quickly able to point out where and how we'd run into the same problems her way. Lionel listened for a bit and then suggested that we try something that he had used on a past project; it was a really good idea. It would, of course, require some adaptation, but it could work out very well for us.

Natasha and Anika joined in, and we ironed it out together. It was sort of exciting, really. In spite of it being his idea, Lionel seemed to be nervous about suggesting anything, but he also contributed. About halfway into our meeting, we started looking back at the pieces we'd already written and seeing if/where they still fit. It looked like we would be left with about half a paper still to write.

This time, we each took pieces that were left to write. Anika and Natasha fought a bit over who took one of the tricky parts, but ultimately we all wound up with pieces we could handle.

A few days later, Lionel asked if I could help him out with one of his pieces. I felt bad because I hadn't started any of my writing, but of course I said yes. We worked on it for about an hour and he answered all his own questions, so I don't know why he needed me.

When we moved on to my work, he couldn't understand any of what I'd thrown together that morning. I knew it needed work, but it was also nice to have him pointing out exactly where. Sometimes it's tough to see what you're thinking through other people's eyes. I am pretty sure he helped me more than I helped him, and I told him so, but he probably didn't believe me - he really doesn't think he's very smart.

- 7 I was a bit late because one of my instructors offered to run a study session to prepare for the midterms, and I desperately needed the help. I felt bad that I forgot to tell the group last week, but when I arrived I learned that everyone else had been late for similar reasons.

In spite of this, everyone was happier with what we had this week and, after running through what we had, the paper was starting to look pretty good. We spent much of our time assembling the pieces into a single paper. When we did, we realized that neither the introduction nor the conclusion worked very well any longer. Natasha asked Lionel to write the introduction, because the new structure of the paper was his idea, but I think he honestly doesn't understand that it was true. He actually denied it - and I don't think it was because he didn't want to write the piece. When he said he'd do it, he made Anika promise that she'd review it the following week.

I volunteered to rework the conclusion, but Natasha asked me instead to proofread and format the document, while she rewrote the conclusion. Anika didn't have anything for the week, and I think she didn't want to feel like a slacker, so she said she'd proofread the document, as well - just to have an extra set of eyes on it.

Natasha also told us she'd be late next week because one of her midterms would run until the start of this meeting.

Proofreading took me awhile. It's a good paper, but you can tell it was written by four different people. I found lots of little things, but there were a few things that will need major rework. One part of what Natasha had written probably made sense when she wrote it, but the instructor completely contradicted it in class, so we'll have to completely rewrite that piece.

- 8 I thought the group would be bummed that I was so nitpicky, but they were thrilled I'd found so much stuff. Anika found good stuff, too, but I had almost everything she did and then about half again as many. We decided that we couldn't make the bigger changes in time for the draft that's due next week. We will be able to write it, but everyone has tight schedules this week. We can't get it written and give anyone else a chance to take a look at it before we have to turn it in; no one felt that would be OK.

Natasha showed up just as we finished going through the fixes to the paper. Next we looked at Lionel's introduction and Anika immediately asked what everyone was thinking: why was it so short? Lionel just shrugged and we all read it. As it turned out, Anika shouldn't have said anything before she read it - it covered everything it needed to and was pretty good. Neither Natasha nor I had any ideas for improving it.

I think Anika felt like she had to do something, so after she thought about it for a moment, she agreed that nothing was missing, but said she had some ideas for beefing it up a bit. A few minutes later we had a new version that was longer and felt a bit more complete. It was good, but not really necessary. I suggested making a part of what Natasha added a bit more concise.

When we were done, Anika said she'd add in the conclusion, make the changes we talked about and have a version of the paper ready to turn in next week in class. Natasha said that she'd try to make the larger changes that I'd suggested. Lionel volunteered to start building a PowerPoint for the upcoming presentation. I felt bad, but asked if anyone minded if I took the week off because I had to prepare for a late midterm next week in my toughest subject. No one minded.

This week I did nothing for this class outside of our meeting.

9 Anika not only brought a copy of our paper to class for the instructor, but also brought copies for each of us to look at between class and our meeting. This way, we didn't waste our meeting time on reading through it. As an added bonus, Natasha had merged her changes into this latest version. Unfortunately, she'd had a difficult time making those changes and they were not complete. She brought a list of questions and possible answers, and we spent a good twenty minutes on that before we came to any answers. At some point while I was listening, I had a fantastic idea so I said I'd take it home and work on it for next week. No one argued with me.

Next we discussed the presentation - beginning with the PowerPoint Lionel had put together. Before Anika could comment (because she always does), Lionel pointed out that this was just a start and that he knew there wasn't much to it. He recommended that everyone claim a few slides and modify them when they worked on what they were going to say. At this, Anika just shut her mouth and I have to admit, that was pretty satisfying. She's not mean or anything, but it was nice to not hear her being critical for once.

Natasha chose a few slides, including the first one, but Lionel said he wanted to introduce us. I was a bit surprised, because I didn't figure he'd volunteer for such a visible role. Ultimately, we decided that they'd both give it a shot and see which one we like best when we practice next week. I'm actually excited about making it into a bit of a competition.

I enjoy public speaking, so I spent a long time iterating over my talking points for our presentation. My roommate is probably sick of hearing it, but I feel good about the presentation.

- 10 I liked my presentation, but Anika and Natasha both had some ideas for improvement. One of Anika's ideas was really a good one, but most of them were sort of picky. It's no big deal, though - while I don't think the ideas really improve anything, they won't hurt either, so I'll make them.

Anika and Natasha both presented well, and they took home a lot of feedback, as well. Frankly, I'm pretty sure my presentation was better than either of theirs. I know that we aren't competing against each other and we all have to do well, but it felt good to know that mine was good - no matter what they said.

Lionel on the other hand... I don't know what was going on there! It looked like this was his first time building a PowerPoint, and he spent all his time playing with his new toy! There were animations and images and words flying in and out. Every slide was completely different, too. The worst part was that he just read all the words off the slide! Everyone - especially Anika - had a lot of feedback for him. I think we should have been a bit gentler with him; although he's really bright, he doesn't seem to know it. I could see on his face that took it really hard.

Needless to say, it wasn't much of a competition. Natasha's introduction was much better than his and we had to go with her for it. I think she might use some of his visual ideas, though - it looks like he spent a bunch of time cropping our heads for the main slide and it was pretty nice (if also a bit cheesy).

After the meeting ended and Natasha and Anika left, I offered to work with him and help him with his presentation, but he said no. I think he was embarrassed. I hope I didn't make him feel worse.

- 11 In class, the instructor returned the drafts and we met briefly during class to review it. There weren't many comments, and most of them were pretty minor or issues that Natasha had already fixed. However, there was one comment that concerned us all: *a diagram might help here*. I can't believe that this was the first time I realized that we were presenting our instructor with a great big wall of text! How could we have missed that? We'd definitely have things to talk about at this week's team meeting.

Lionel arrived a bit late as we were talking about our complete lack of images. However, while we were still at the complaining-about-it stage, he was way ahead of us. He actually apologized as he pulled out a bunch of sketches he'd "thrown together." They were fantastic! His were done with pencil on scraps of paper and Natasha copied them over with black pen on full sheets so they were crisper and easier to see. We worked on them for about half an hour, making small changes here and there. Natasha volunteered create new versions to include in the document.

We spent the rest of the meeting working through the presentation and everyone sounded better this week - especially Lionel. It was like he was a completely different person. We all commented on the dramatic improvement. I'm not sure he quite believed it, but there was some relief on his face. He was also more active in providing feedback to everyone else. He pointed out that I'd included something that wasn't actually in our paper. I told him where I'd found it and he seemed glad, but not satisfied. He asked if we wanted to talk in the presentation about something that we didn't mention in the paper. Natasha and Anika didn't think it was a big deal, but he clearly felt like it's a bad idea. He wouldn't let it go, but he wasn't saying I needed to take it out - he was asking where we should add it to the paper. I told him that I didn't think it was a big deal and also that I didn't have time to do it. So, he said that he'd add it into the paper himself. Problem solved!

I practiced some more for the presentation, but mostly left this class alone because I'm pretty sure we are in good shape. However, after giving it a lot of thought, I realized that Lionel had a good point. I removed that piece that we spent so much time discussing in the meeting. It tightened things up a bit to do so and wasn't really needed.

- 12 Lionel's images really added a lot to our paper, making it easier for people to understand parts of it. Lionel also claimed one of the images for one of his slides, and it worked much better than the bullet points he'd had on there. I can't believe we didn't have any images in at all until now.

This week, the presentation was much better and after another three practice runs, it sounded smooth. Anika managed to slow down quite a lot. I think Lionel was a little bit frustrated to find that, after our argument last week, I'd removed the bit he added into the paper. I probably should have told him when I made that decision. Natasha added the photos of us to her introduction slide, and they looked pretty good. Finally, and arguably most importantly, we managed to cut it down to the correct time.

I practiced a few more times during the week when I was able to find a moment here and there.

- 13 The presentation went OK, but not quite as smoothly as I'd hoped. I was nervous and I think I didn't speak as loudly as I should have. I'm pretty sure that most people heard me, but it should have been louder. Anika, on the other hand, raced through her presentation and as a result, I don't think anyone understood her. We wound up finishing up about thirty seconds early.

Our classmates asked some good questions, which showed that our presentation was decent; they understood enough to ask questions. Anika, who spoke last, naturally received all the questions, but she handed them off to whomever she felt was best suited to answer them - that was a nice touch. There weren't a lot of questions, and none of them came to me. We should have discussed clothes beforehand because Lionel wore slacks and a sports jacket, and Natasha wore a dress skirt and blouse. Anika and I were dressed very casually, and it was a bit uncomfortable.

Generally, though, I think we felt good about the work we'd done. I expect positive feedback and good grades.

We only met briefly this week because we were mostly finished and we all had finals to study for, but I said I'd go through the paper one more time. We all agreed that we'd only meet briefly next week to address any large issues I might find.

I spent about another hour and didn't find anything major - just lots of little stuff that I could fix without anyone else's input.

14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. As we went through it, Anika took issue with a few of the changes I'd made. The language I used was a bit ambiguous and it could be read to mean the opposite of what we intended. She was right, but I don't feel badly, because I don't know how she noticed it. It took the rest of us a while to see it. Maybe it was because we all know what we're trying to say, but once I saw it, I couldn't un-see it. When I finally did see it, I said I'd fix it, but I wasn't really sure that I could. Fortunately, Anika saved me. She said she had no problem doing it - as long as everyone trusted her (there wasn't enough time for her to make the changes and get us all to say OK in time). Of course we all trusted her and said so.

The night before she sent it in to our instructor, Anika sent us a copy of the document to make sure we were all OK with it. I took a quick look and then wrote back to tell her to go ahead and submit it.

Week Natasha

- 1 In group time, we began by setting up weekly team meetings. My group members seem to be nice and one of them, Lionel, is a transfer student. The project is pretty big and fairly open-ended, so we brainstormed topic ideas for the most of the time.

I tried to think creatively while we brainstormed. Most of what I suggested wasn't realistic and I knew that, but I was taught that you should throw out all ideas uncritically during a brainstorming session. They did make the rest of the group laugh, though, and others often built off of them, so I think it was a success. At some point, Lionel noticed that no one was taking notes, so we recounted what we could remember while he wrote them down, and we discussed those.

Before the meeting ended, we crossed off the ones that didn't seem to work (this got rid of most of mine - haha!) and narrowed the list down to six. Alex asked us to each look for resources on all the topics so that next week, we will report back and select a topic together.

This was not exactly a difficult task and it only took about an hour of my time.

- 2 Anika found a lot of materials for one of the topics that I had a rough time with. Alex and Lionel also focused on the same two as I did. We ended up with a lot of duplication, but at least we all know those topics. When we dug into what Anika found for the third topic, we couldn't see how we would be able to use much of it - the research just had mentions of what we needed. Our discussion quickly centered on our most promising two topics.

There was a lot of discussion about which to choose - everyone seemed to have a strong opinion. I suggested that maybe we could combine them into one. That didn't really work, but I think it helped us to see them a bit differently before we settled into making decisions. Our first vote was split down the middle, so Alex made a list of pros and cons. That helped us to put things in perspective. Our next vote was unanimous. As Alex pointed out, the other topic, although more exciting on the surface, would have probably been much more complicated and difficult.

The obvious next step was to find more materials on our selected topic, so we figured out the major subtopics and divided them amongst ourselves. We decided everyone would return next week with summaries of what we've found to make it easier for the group to get moving quickly. To make sure we didn't wind up with a million competing summaries for the many duplicate materials, Alex thought to split up the materials we'd already got among us.

I found some more materials this week, then I wrote my summaries. I probably spent an hour on this.

- 3 During our meeting, we began sorting through the materials. Lionel's and my materials were in good shape. I thought that one of Lionel's summaries was a bit odd, but when I read it out loud to check if I was crazy, I realized I was reading it wrong. I got everyone to laugh again - but this time it wasn't at all intentional. Lionel took it a bit further, however, and turned it into an interesting suggestion.

Alex's summaries, unfortunately, were confusing, and no one understood them. He had to explain what he meant a lot of the time; that was frustrating. He seemed a bit embarrassed and told us he'd rewrite the summaries to make them clearer.

Anika's summaries, on the other hand, were just a sentence or two each. Initially, she seemed to think that would be useful to us, and she couldn't seem to understand why they weren't. After some awkward moments, Alex asked her if she'd prefer to use my summaries or her own to write the paper; I think it clicked for her. We all had things to do to improve our work for next week.

It took me about twenty minutes to apply my group's suggestions.

- 4 Anika wasn't at the meeting this week. She wasn't in class, either, and no one had heard anything from her. We weren't sure what was going on.

When it was clear that she wouldn't be coming, we began working through Alex's updated materials; they were much improved. They could use some editing, but at least they make sense now, and he is obviously very smart. I think maybe his mind races ahead of his fingers. Lionel volunteered to try to redo Anika's work and put what we have together for the assignment due next week, but I said no. I don't think it's fair that he should be overloaded like that. I told him I'd work on Anika's part and get it to Lionel three days before class so he could include them. I also asked Alex to put together a basic outline of what the paper should look like so we can get started on that.

It took me about an hour to redo Anika's materials and their summaries and I got Lionel the materials a day early. The next day we heard from Anika; her mother had been ill and Anika went home to visit her in the hospital. In spite of this, she still managed to send us her redone summaries. I expect Lionel had time to incorporate them.

- 5 Lionel turned in our assignment this week in class. Our instructor gave us some time to meet as a group at the end of class. We reviewed the outline Alex put together since no one else had brought anything with them. Alex seemed to be satisfied with it, but Anika and I weren't. We didn't really have much time to get into it, though.

At our meeting, it took a while to really understand where we weren't connecting. I thought that Anika and I both wanted the same thing, but it turned out we had completely ideas of where this was going! Alex, Anika and I talked for about half an hour, but Lionel mostly didn't say anything. I don't know if he just didn't care, but he was pretty quiet. Ultimately, we sort of settled on my plan and modified the outline Alex had put together to look more like what I was describing.

Anika then suggested we split the outline up into quarters and each write one for next week. Lionel spoke up quickly for the second section, so I grabbed the first part. Anika took the last, and that left the third part for Alex.

I banged my head against this assignment for over an hour before I gave up. This approach just wasn't working and I wasn't sure how we could fix it.

- 6 No one was really able to make their pieces work quite right, so we had to rethink our approach. Anika once again brought out her initial preference from last time, but Alex was a step ahead of her and pointed out where we'd run into the same problems that way. Lionel listened for a bit and then suggested that we try something he had used on a past project, and it was a really exciting idea. It would, of course, require some adaptation, but it could work out very well for us.

Anika and I ironed it out together. In spite of it being his idea, Lionel seemed to be nervous about suggesting anything, but he did contribute. About halfway into our meeting, we started looking back at the pieces we'd already written to see if/where they still fit. It looked like we would be left with about half a paper still to write.

This time, we each claimed pieces that were left to write. Anika took one of the bits that I'd already started looking at. I told her I wanted to write that one, but she wouldn't budge. She eventually traded with me for another piece, but not the one I'd really wanted. I just went with it because I didn't want to argue.

I had a lot of writing to do this week, but I also had a lot to do in my other classes, so I spread this out over two nights of about an hour and a half each. Maybe not the most productive time in the world, but I got it done.

- 7 I was a bit late because it took me longer than I'd expected to finish up a project due in the class immediately after our meeting. As it turned out, though, I wasn't the only one late - Alex didn't show up for about half an hour! I guess mid-term study sessions are taking up a lot of time.

Everyone was happy with what we had this week. After running through what we had, the paper was starting to look pretty good. We spent much of our time assembling the pieces into a single paper. When we did, we realized that neither the introduction nor the conclusion worked very well any longer. I figured that Lionel should write these, since he had to have the best handle on it. But he responded that it wasn't his idea and that he wasn't comfortable with it. This seemed absurd; I reminded him that he was the one who suggested this structure when we were all stuck. Eventually, he said he'd do it but he wanted someone to review it afterward; Anika volunteered.

Alex volunteered to rewrite the conclusion, but I was afraid his writing wasn't very good, so I asked him instead to proofread and format the document while I rewrote the conclusion. Anika didn't have anything for the week and I think she didn't want to feel like a slacker, so she said she'd proofread the document, as well - just to have an extra set of eyes on it. Before we ended the meeting, I told everyone I'd be late next week because one of my midterms would run until the start of this meeting.

The conclusion was pretty straightforward, but I stupidly started off trying to fix what we had; that just made a mess. When I decided to just go ahead and rewrite the whole thing, everything fell into place nicely. I was able to knock it out in under an hour.

- 8 I arrived just as the group finished going through the fixes to the paper. I figured I'd go through it on my own later, but everyone looked satisfied.

We next looked at Lionel's introduction, and Anika immediately asked what everyone was thinking: why was it so short? Lionel just shrugged and we all read it. As it turned out, Anika shouldn't have said anything before she read it - it really covered everything it needed to and was pretty good. Neither Alex nor I had any ideas for improving it.

I think Anika felt like she had to do something. After she thought about it for a moment, she said that while nothing was missing, she had some ideas for beefing it up a bit. A few minutes later, we had a new version that was longer and felt a bit meatier.

When we were done, Anika said she'd add in the conclusion, make the changes we talked about and have a version of the paper ready to turn in next week in class. I, in turn, volunteered to try to make the larger changes that Alex suggested. Lionel said he'd start working on a PowerPoint for the upcoming presentation. Alex asked if anyone minded if he didn't do anything this week because he has a late midterm next week in his toughest subject. It made sense to me and no one seemed to mind, so we went with it.

I did re-read the document this week, and Alex and Anika had done a great job with it. It took me about two hours to make the changes, though, because I had to do a bunch of research to support it. I was still left with a bunch of questions that I really need the group to work out.

- 9 Anika not only brought a copy of our paper to class for the instructor, but also brought copies for each of us to look at between class and our meeting. This way we didn't have to waste our meeting time on reading through it. As a result, I was able to merge my changes into the version Anika gave to the instructor, so everything was nicely consolidated.

I brought the merged document, along with a list of remaining questions and possible answers, to our group meeting. We spent twenty minutes on that before we came to any answers. Alex was pretty quiet during most of the discussion, but after noticing something, he said he thought he had an idea. He tried to explain it and, in true Alex form, he didn't do a very good job, but what I did understand seemed to make sense. I think he saw that we weren't quite following his explanation, so he asked if he could take it home and work on it for next week. I was hesitant, because he doesn't usually explain his own ideas well, but I said OK. We still have time in case it requires too much cleanup. In fact, everyone was OK with it.

We next discussed the presentation - beginning with the PowerPoint Lionel had put together. Before Anika could comment (because she always does), Lionel pointed out that this was just a start; he knew there wasn't much to it. He recommended that everyone claim a few slides and modify them when they worked on what they were going to say. At this, Anika just shut her mouth. I have to admit, that was pretty satisfying. She's not mean or anything, but it was nice not to hear her being critical for once.

I claimed a few slides, including the first one, but Lionel said he wanted to introduce us. I was surprised, because I didn't figure he'd volunteer for such a visible role. We ultimately decided that we should both give it a shot and see which one we all like best when we practice next week. I'm actually excited about making it into a bit of a competition.

While I'm told I'm good at it, I really hate public speaking. I wanted to go first because I want to get my part over with as soon as possible. I think I over-prepare to avoid looking stupid. I spent about two hours agonizing over this two-minute presentation.

- 10 Everyone's presentations were pretty good, except for Lionel's. I'm not sure what was going on, but it didn't seem like he had prepared very much. He did some fun things with his slides, but then he just read them verbatim. Also, I thought the slides were also quite tacky. I tried to keep out of it because I didn't want to be obnoxious, since his work was being compared to mine. Anika was pretty harsh, though. I don't think she knows how not to be, but she really should have been gentler; he's really bright, but he doesn't seem to know it. I think he takes criticism pretty hard.

It wasn't really much of a competition. I'll be doing the introduction - even Lionel voted for me to do it. I am going to try to use some of his ideas to spruce up the slides though - just not quite so much. I especially like what he did with images of our heads bouncing onto the slide. It was a bit silly, but fun.

I spent another hour this week on my slides and practicing. I also enlisted my best friend to listen and give me feedback.

- 11 In class, the instructor returned the drafts. We met briefly to review ours. There weren't many comments, and most of them were pretty minor or issues that I had already fixed. There was one comment, however, that concerned us all: *a diagram might help here*. We were presenting our instructor with a great big wall of text! How did we miss that? We'd definitely have things to talk about at this week's meeting.

Lionel arrived late as we were talking about our complete lack of images. While we were still at the complaining-about-it stage, though, he was way ahead of us. He actually apologized as he pulled out a bunch of sketches he'd "thrown together." They were a great start. They were tough to see, so I quickly copied them over with black pen on full sheets so they were crisper. We worked on them for half an hour, making small changes here and there. I volunteered create new versions to include in the document.

We spent the rest of the meeting working through the presentation. Everyone sounded better this week - especially Lionel. It was like he was a completely different person. We all commented on the dramatic improvement. I'm not sure he quite believed it, but there was some relief on his face and I felt better. He was also more active in providing feedback to everyone else. He pointed out that Alex had included something that wasn't actually in our paper. Alex told him where he'd found it and Lionel seemed glad, but not satisfied. He asked if we wanted to talk in the presentation about something that we didn't mention in the paper. I don't think it was a big deal because it was true, but he clearly felt like it was a bad idea and he wouldn't let it go. He wasn't telling Alex to take it out - he was asking where we should add it to the paper. He offered to make the change, so we said OK.

I practiced some more for the presentation, but mostly I already felt good about that. I instead spent my time on creating new versions of the images for the paper. Lionel must have spent a lot of time thinking about these. I was able to make them clearer and crisper, but there wasn't much else I could do to improve upon them, and they really add a lot to the paper.

- 12 Everyone loved what the images did for our paper - they would make it a lot easier for people to understand certain parts of it. Lionel also claimed one of the images for one of his slides, and it worked much better than the bullet points he'd had on there. I still can't believe we didn't have any images in at all until now.

The presentation was much better this week. After another three practice runs, it sounded smooth. I felt bad for Lionel, though, because after last week's discussion, Alex had second thoughts and removed the controversial bit from his presentation, but didn't think to let Lionel know, so Lionel still added it to the paper. I decided to keep Lionel's photos of us on our introduction slide, and everyone liked that. Finally, and arguably most importantly, we managed to cut it down to the correct time.

I practiced a few more times during the week when I was able to find a moment here and there.

- 13 The presentation went OK, but not quite as smoothly as I'd hoped. Alex seemed nervous and got quieter than I'd have liked, but I'm pretty sure that most people heard him. Anika, on the other hand, raced through her presentation; I don't think anyone understood her. We wound up finishing up about 30 seconds early.

Our classmates asked some good questions, which showed that our presentation was decent; they understood enough to ask questions. Anika, who spoke last, naturally received all the questions, but she handed them off to whomever she felt was best suited to answer them - that was a nice touch. There weren't a lot of questions, and none of them came to me.

We should have discussed clothes beforehand; Lionel wore slacks and a sports jacket, and I wore a dress skirt and blouse. Anika and Alex were dressed very casually, and it was a bit uncomfortable.

Generally, though, I think we felt good about the work we'd done. I expect positive feedback and good grades.

We only met briefly this week because we were mostly finished and we all had finals to study for, but Alex said he had time to go through the paper once more. Quite frankly, he's the best person to do it, so no one disagreed. We also agreed that we'd only meet briefly next week to make sure Alex didn't find any huge problems.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. As we went through it, Anika took issue with a few of the changes Alex made. It didn't seem like anything until she pointed it out, but some of the language he used was a bit ambiguous. It could be read to mean the opposite of what we intended.

It took us all a while to see it, because we all know what we're trying to say, but once I saw it, I couldn't un-see it. Alex seemed to have the hardest time of it. He hesitantly volunteered to fix it before submission, but we could all see that was a bad idea. Anika said she had no problem doing it as long as everyone trusted her, because there wasn't enough time for her to make the changes and get us all to say OK in time. Of course, we all trusted her and said so.

The night before she sent it in to our instructor, Anika sent us a copy of the document just to make sure we were all OK with it. I didn't have a chance to read it carefully, but I wrote back and said OK.

Week Anika

1 In group time, we began by setting up weekly team meetings. My group members seem to be nice. One of my teammates, Alex, I recognized from one of our big lecture courses last semester. One of the others, Lionel, is a transfer. The project is pretty big and fairly open-ended, so we brainstormed topic ideas for the most of the time.

I didn't have a whole lot to say, so I mostly listened, but everyone else seemed to have a lot of ideas. Natasha's ideas made me laugh. She seems to be working hard to think outside the box, and she mostly did it. This meant that many of her ideas weren't really useable, but they were fun and they seemed to give other people ideas, too. At some point, Lionel noticed that no one was taking notes, so we recounted what we could remember while he wrote them down, and we discussed those.

Before the meeting ended, we crossed off the ideas that didn't seem to work (this got rid of most of Natasha's) and narrowed the list down to six. Alex asked us to look for resources on all the topics so that next week, we will report back and select a topic together.

When I started looking for reference materials, I got off on a tangent. I wound up spending two hours on the task and found a bunch of materials, but most of them were for just one topic. I don't think they'll really work for what we need.

- 2 Alex, Lionel and Natasha all focused on the same two topics, and everyone agreed that the topic I'd done the most work on wasn't really viable. We ended up with a lot of duplication - especially between Alex and Natasha - but they all seemed to have a pretty good handle on both topics. Our discussion quickly centered on our most promising two topics.

There was a lot of discussion about which to choose - everyone had an opinion. Then Natasha suggested that we try to combine them. That didn't really work, but I think it helped us to see them a bit differently before we settled into making decisions. Our first vote split evenly down the middle, so Alex made a list of pros and cons. It helped to put things in perspective. Our next vote was unanimous. As Alex pointed out, the other topic, although more exciting on the surface, would have probably been much more complicated and difficult.

The obvious next step was to find more materials on our selected topic, so we figured out the major subtopics and divided them amongst ourselves. We decided everyone would return next week with summaries of what they'd found to make it easier for the group to get moving quickly. To make sure we didn't wind up with a million competing summaries for the many duplicate materials, Alex thought to split up the materials we'd already got among us.

I found some more materials that week, then I wrote my summaries. I probably spent an hour on this class work.

- 3 During our meeting, we began sorting through the materials. Lionel's and Natasha's materials were in good shape. Natasha made me laugh when she misread one of my summaries and shone a completely different light on it. It turned into an interesting suggestion, too.

Natasha's contributions were solid, and we didn't spend too much time on them, but Alex's summaries were confusing and no one understood them. He had to explain what he meant a lot of the time. That frustrated Lionel and Natasha.

We then looked at my summaries, and they didn't think I'd written enough. I thought that I'd written everything that was necessary and I thought they were upset that I didn't pretty it up, but then Alex asked me flat out if I'd prefer to use Natasha's summaries or my own to write the paper; that's when I got it.

I had only been thinking about doing this for the assignment due in two weeks because I don't do summaries like this myself, but I guess that's sort of a waste of time, isn't it? If we're to get a good grade here, we'll all need to help each other out, won't we? I did feel a bit stupid, but he was right.

Fortunately, we all have things to do to improve our work for next week.

I spent an hour cleaning up and filling out my summaries to be as complete as Natasha's.

- 4 My mom has been ill for some time, and I found out that she was in hospital, so I drove back home to see her. The doctors took two days to figure out what it was and it wound up a false alarm. I headed back to school when they said they were comfortable with discharging her and, honestly, that was the first time I even thought about this project.

When I got back to town, I emailed the group to apologize and I sent out my summaries. I don't know why I didn't think to do that before I left, but I just didn't. I hope they aren't too upset, but I haven't heard anything back from any of them.

- 5 Lionel turned in our assignment this week in class, and our instructor gave us some time to meet as a group. We spent the time looking at the outline Alex put together, since no one else had brought anything with them. Alex seemed to be satisfied with it, but Natasha and I weren't. We didn't really have much time to get into it, though.

At our meeting, it took a while to really understand where we weren't connecting. I thought that Natasha and I both wanted the same thing, but it turns out we had completely different ideas of where this was going! Alex, Natasha and I talked for half an hour, but I think Lionel was afraid to say anything. We ultimately sort of settled on Natasha's plan and modified the outline Alex had put together to look more like what she was describing. I still think my idea was better, but hers wasn't bad. I could see that I wasn't convincing anyone, so I went along with it.

With the outline settled, I suggested we split the outline up into quarters and each write one for next week. Lionel spoke up quickly for the second section. Natasha grabbed the first part, and I took the last. That left the third part for Alex.

It took me an hour and a half to see that this approach just wouldn't work. We would have to go back and do it the way I thought at first, so I stopped about mid-way through and started working on a version that went the way I thought it should. I had a lot of other work for this week, though, so I didn't get very much of that done. I figure I'll still be ahead of everyone else, anyway.

- 6 I was right - no one was really able to make the pieces work quite right, so we had to rethink our approach. When I asked that we look at my idea from last week again, though, Alex had also been thinking about it and found that we'd run into the same problems that way. Lionel suggested that we try something he had used on a past project; it was a really good idea. It would, of course, require some adaptation, but it could work out very well for us.

It was quite exciting, and we all worked on ironing it out together. Lionel seemed to be nervous about suggesting anything, but he contributed. About halfway into our meeting, we started looking back at the pieces we'd already written to see if/where they still fit. It looked like we would be left with about half a paper still to write.

This time, we each claimed pieces that were left to write. For some reason, Natasha wanted one of the tricky bits that I spoke for. She didn't have any real reason for wanting it, except that I think she wanted to offload a boring piece. I traded her one of my other fun parts, though, for the boring bit. Everyone was happy (I think)!

I wound up spending an hour on the tricky piece alone. I was proud of it when I was done, but I still had other parts to do. I wound up spending an hour and a half more over the course of the week before I was ready for our meeting.

- 7 Everyone else was late for our meeting this week. I guess that they all had mid-term study sessions today, and they all forgot to mention it last week. Kind of annoying, but there was nothing to be done about it. Alex didn't arrive for half an hour!

I didn't stay upset for long, though. Everyone had done their part for the week and, after running through what we had, the paper was starting to look pretty good. We spent much of our time assembling the pieces into a single paper. When we did, we realized that neither the introduction nor the conclusion worked very well any longer. Natasha asked Lionel to write the introduction, because the new structure of the paper was his idea, but he claimed that it really wasn't his idea and didn't feel up to it. Alex pushed this, though, and I volunteered to review it if he was concerned; that seemed to satisfy Lionel. He said he'd do it, but he made me promise that I'd review it the following week - I thought this was odd, because I'd already volunteered to do it, but of course I promised I would.

Alex volunteered to rework the conclusion, but Natasha asked him instead to proofread and format the document while she rewrote the conclusion. He's not a very good writer. This left me without anything to do for class for the week and I felt bad, so I said I'd proofread the document, as well, to have an extra set of eyes on it. Before we ended the meeting, Natasha told us she'd be late next week because one of her midterms would run until the start of this meeting.

Proofreading took me awhile. It's a good paper, but it's been written by four different people. After an hour, I felt I'd improved it significantly.

- 8 While Alex may not be good at making sure he puts all the right detail in himself, he is good at making sure everyone else does. He found all sorts of issues all over the paper - much more than I found. There were a few items I'd got that he didn't, but he did a much more thorough job than I'd done. Most of the issues were pretty small, but a few would have to wait for after we turn in the draft next week. We will be able to rewrite it, but everyone has tight schedules this week.

We next looked at Lionel's introduction; it was incredibly short. I asked him why and he just shrugged, so there was nothing to do but to read it. I probably shouldn't have said anything before I read it because he managed to cover all the bases in about half the word count than what I could write.

Neither Natasha nor Alex had any ideas for improving it, but I was still uncomfortable with it being so short. I told them that, although he was right and everything necessary was in there, I was still uncomfortable with it being so short. The others nodded a bit - they didn't argue. I made a couple of suggestions and so did Natasha. It didn't really add anything, but it made me feel better. Alex cut some of it back down again, but I think we all felt good about it.

When we were done, I said I'd add in the conclusion, make the changes we talked about and have a version of the paper ready to turn in next week in class. Natasha said that she'd try to make the larger changes that Alex had suggested. Lionel volunteered to start building a PowerPoint for the upcoming presentation. Alex asked if anyone minded if he didn't do anything this week because he has a late midterm next week in his toughest subject.

It only took me half an hour to get through everything this week, but then I took another half hour reviewing it since we'd be submitting it. When I was done, I made sure I had copies for everyone to review, in addition to the one for the instructor.

- 9 We were happy to have copies to look at, but our instructor didn't give us any group time in class, so it wasn't as helpful as I'd hoped it would be. It did mean we didn't need to waste our meeting time on reading through it, though.

Natasha merged her changes into this latest version, which she brought to our meeting. She'd had a difficult time making those changes, however, and they were not complete. She brought a list of questions and possible answers, and we spent twenty minutes on that before we came to any answers.

Alex was pretty quiet during most of the discussion, but suddenly he said he had an idea after seeing something that Natasha had done. He tried to explain it, but I think he saw that we weren't quite understanding, and he asked if he could take it home to work on it for next week. I was hesitant because he doesn't usually explain his own ideas well, but I said OK. We still have time in case it requires too much cleanup. In fact, everyone was OK with it.

We next discussed the presentation - beginning with the PowerPoint Lionel had put together. Lionel emphasized that this was just a start and that he knew there wasn't much in it. He recommended that everyone claim a few slides and modify them when they worked on what they were going to say. Natasha spoke for a few slides, including the first one, but this time Lionel said he wanted to introduce us. I was surprised, because I didn't figure he'd volunteer for such a visible role. We ultimately decided that they'd both give it a shot and see which one we'd all like best when we practice next week.

I didn't spend too much time on this this week. I didn't take that much on because I had a lot of work for my other classes. I don't think anyone noticed, but my parts were pretty simple.

10 Everyone's presentations were pretty good, except for Lionel's. I don't know what was going on there! It looked like this was his first time building a PowerPoint, and he spent all his time playing with his new toy! There were animations, images and words flying in and out. Every slide was completely different, too. The worst part was that he just read all the words off the slides! We all had a lot of feedback for him - to be fair, there was a lot of feedback for everyone, but with him it wasn't nit-picky; it was pretty major.

I think maybe we were a bit too harsh, because he was really down afterwards. We should have been gentler with him; although he's really bright, he doesn't seem to know it. I could see on his face that he took it really hard, but I just couldn't keep my mouth shut. I wasn't the only one, but I was probably the harshest. I really did try to be constructive, but it probably didn't come out that way.

Needless to say, it wasn't much of a competition. Natasha's introduction was much better than his, so she's going to present it. I think she might use some of his visual ideas, though - it looks like he spent a bunch of time cropping our heads for the main slide, and it was actually pretty nice (if also a bit cheesy).

I spent some time practicing and applying the feedback this week, but that didn't take too long.

- 11 In class, the instructor returned the drafts, and we met briefly during class to review it. There weren't many comments. Most of them were pretty minor or issues that Natasha had already fixed. There was one comment that concerned us all, though: *a diagram might help here*. We were presenting our instructor with a great big wall of text! How did we miss that? We'd definitely have things to talk about at this week's team meeting.

Lionel arrived a bit late as we were talking about our complete lack of images. While we were still at the complaining-about-it stage, though, he was way ahead of us. He actually apologized as he pulled out a bunch of sketches he'd "thrown together." They were a great start. Natasha quickly copied them over with black pen on full sheets so they were crisper and easier to see. We worked on them for half an hour, making small changes here and there. Natasha volunteered create new versions to include in the paper.

We spent the rest of the meeting working through the presentation. Everyone sounded better this week - especially Lionel. It was like he was a completely different person. We all commented on the dramatic improvement. I'm not sure he quite believed it, but there was some relief on his face, and I felt better. He was also more active in providing feedback to everyone else. He pointed out that Alex had included something that wasn't actually in our paper. Alex told him where he'd found it and Lionel seemed glad, but not satisfied. He asked if we wanted to talk in the presentation about something that we didn't mention in the paper. I didn't think it was a big deal because it was true, but he clearly felt like it was a bad idea and he wouldn't let it go.

He wasn't telling Alex to take it out - he was asking where we should add it to the paper. I still didn't want to waste time on it because I thought it was fine, but he offered to make the change, so we said OK.

I practiced some more for the presentation, but mostly left this class alone because I'm pretty sure we are in good shape. The biggest comment they'd all had for me was that I was speaking too fast, so I worked on slowing it down.

- 12 Lionel's images really added a lot to our paper. They would really make it easier for people to understand parts of it. Lionel also claimed one of the images for one of his slides. It worked much better than the bullet points he'd had on there. I still can't believe we didn't have any images in at all until now.

The presentation was much better this week. After another three practice runs, it sounded smooth. I felt bad for Lionel, though, because after last week's discussion, Alex had second thoughts and removed the controversial bit of his presentation, but he didn't think to let Lionel know, so Lionel had still added it to the paper. I could see how frustrated Lionel was, but he didn't say anything at all about it. It was actually difficult to keep from laughing about it, but I am pretty sure no one would have liked that very much.

Natasha added the photos of us to her introduction slide, and they looked pretty good. Finally, and arguably most importantly, we managed to cut it down to the correct time.

I practiced a few more times during the week when I was able to find a moment here and there.

- 13 The presentation went OK, but not quite as smoothly as I'd hoped. Alex seemed nervous and got quieter than I'd have liked, but I'm pretty sure that most people heard him. They told me that, despite my efforts to avoid doing so, I raced through my presentation. We wound up finishing up about 30 seconds early.

Our classmates asked some good questions, which showed that our presentation was decent (because they understood at least enough to ask questions). Since I spoke last, it seemed natural that I would direct questions to the rest of the team (the ones who seemed to know those topics best), and that worked quite well. There weren't a lot of questions, but enough.

We probably should have discussed clothes beforehand. Lionel wore slacks and a sports jacket, and Natasha wore a dress skirt and blouse. Alex and I were dressed very casually, and it was a bit uncomfortable.

Generally, though, I think we felt good about the work we'd done. I expect positive feedback and good grades.

We only met briefly this week because we were mostly finished, and we all had finals to study for, but Alex said that he had time to go through the paper once more. Quite frankly, he's the best person to do it, so no one

disagreed. We also agreed that we'd only meet briefly next week to make sure Alex didn't find any huge problems.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. As we went through it, I took issue with a few of the changes Alex made. The language he used was a bit ambiguous, and it could be read to mean the opposite of what we intended. I had to explain it a few times and it took them a while to see it, but eventually they did. They agreed that it needed to be fixed.

Alex offered to fix it, but I said I'd do it because everyone else had a hard time seeing it to begin with. It really only made sense for me to do it, but I was nervous about making a change and turning it in without everyone getting a chance to see it (we figured there wasn't enough time for me to make the changes and get an OK from everyone in time). They all said I should just go ahead and do it, though, so I took it.

I worked on it that night and I could have sent it out, but figured it would be best to proofread the whole thing the next day. I sent it out to the team the next night and I got responses the following morning. I actually managed to send the paper in a bit early as a result!

Week Lionel

1 In group time, we began by setting up weekly team meetings. This project is pretty huge and I don't think any of us have had to do one like this before. I know how to work hard, though - I had a rough time at my previous college, before I could bring my grades up enough to transfer in here. The rest of my group are freshmen, and it looks like they all knew each other already. I felt a bit left out, but that's life, I guess.

The project is fairly open-ended, so we brainstormed topic ideas for most of the first meeting. Natasha's ideas were easily the most fun - while Alex and I were suggesting fairly standard things, she managed to keep coming up with interesting perspectives. Not all of them were appropriate, but they sure kept the discussion lively, and it didn't take much to make them useable.

Anika was quiet. I could tell that she was paying attention, but I guess she's a bit shy. When we started to slow down a bit, I realized that no one was taking any notes, so we tried to run back through the ideas while I wrote them down. We talked about the ones we remembered.

Before the meeting ended, we narrowed it down to six ideas. We decided to all look for resources on all the topics. We will discuss them and decide on one next week.

During the week, I tried to look for stuff on all six topics, but while they all sounded good during the meeting, only two of them really seem to work for our project. Interestingly, one of the two was one that I'm pretty sure started with a joke by Natasha. After an hour, I felt well-prepared for those two topics, but I kept looking for stuff on the other topics for another hour to make sure I had something for all the rest.

- 2 Anika found a lot of materials for one of the topics that I had a rough time with, but Alex and Natasha also focused on the same two as I did. We ended up with a lot of duplication, but at least we all know those topics. When we dug into what Anika found for the third topic, I couldn't see how we would be able to use much of it - the research just had mentions of what we needed. Our discussion quickly became about our most promising two topics.

We had a lot of discussion about which to choose - everyone had an opinion. Then Natasha suggested that we try to combine them. We wasted ten minutes trying to see if we could make that work, but ultimately we couldn't. We wound up back where we started. Our first vote split evenly down the middle, but Alex started writing pros and cons; seeing that made both Anika and I change our votes. The other topic, although more exciting, would have probably been more difficult.

The obvious next step was to find more materials, so we divided up the major subtopics amongst ourselves. We decided everyone would return next week with summaries of what they'd found to make it easier for the group to get moving quickly. Alex also split up the duplicates among us.

I found some more materials, and then I spent an hour writing and proofreading those summaries. Everyone in my group really seems to belong here. It's going to be tough to keep up, but if I lose my scholarship, I'm finished.

- 3 During our meeting, we began sorting through the materials. I showed mine first to get it over with, and no one had any complaints. Natasha made me laugh when she misread one of my summaries and shone a completely different light on it. It turned into an interesting suggestion, too.

Natasha's contributions were solid and we didn't spend too much time on them. Alex's materials were difficult to understand and we needed his help to interpret what he meant. He seemed a bit embarrassed and told us he'd rewrite the summaries to make them clearer.

Anika's summaries were just a sentence or two each. I don't know how she thought that would be useful to us. After some awkward moments, Alex asked her if she'd prefer to use Natasha's summaries or her own to write the paper, and I think it clicked for her. We all had things to do to improve our work for next week.

I carried Natasha's suggestion through my summaries and I think I did a pretty good job, but it really didn't take much time. I felt like I should be doing more, but couldn't think of anything *to* do, so I mostly focused on my other classes this week.

- 4 Anika wasn't at the meeting when I got there. She hadn't been in class, and no one had heard anything from her. We weren't sure what was going on.

When it looked like she wouldn't be coming, we began working through Alex's updated materials; they were much improved. They could use some editing, but at least they made sense now, and he is obviously very smart. I think maybe his mind races ahead of his fingers. I volunteered to try to redo Anika's work and put what we had together for the assignment due next week, but Natasha said no. She said she'd work on Anika's part and get it to me to three days before class so I could include them. She also asked Alex to put together a basic outline of what the paper should look like so we could get started on that. Alex agreed, and I thought it was a great idea for him to keep us moving forward.

Natasha got me the materials a day early, and I had plenty of time to put everything together. It took half an hour to put it all together and another half to clean it all up.

The next evening, Anika got in touch with all of us, explaining that her mother had taken ill and that she'd had to return home to be with her in the hospital. She'd also included the materials she'd been working on. They were much improved - better in most cases than what Natasha had

been able to put together. I was glad to have them, but it meant another forty five minutes to merge them with what Natasha provided.

- 5 I turned in our assignment this week in class, and our instructor gave us some time to meet as a group. We spent the time looking at Alex's outline since that was the only new thing we had. I thought it was decent, but Anika and Natasha seemed to feel differently. We didn't have enough time to really get into it during class, but it was clear that the three of them had different visions of what the paper should look like.

Alex had made a few changes and once it was clear what those visions were, I had to admit that they all had good ideas. I didn't have much to say at first because I don't usually outline my papers - I just start writing, but working in a group we have to agree on who is writing what. After 30 minutes of arguing (that I mostly stayed out of), we modified Alex's outline to incorporate much of what Natasha wanted. Over the course of the discussion, Natasha won Anika over to her perspective.

With the outline settled, Anika suggested we split the outline up into quarters and each write one for next week. I spoke up quickly for the second section because I wasn't sure I could write the introduction or the conclusion. Fortunately, Natasha took the former and Anika took the latter.

It took me two hours to write my part of the paper, but then I spent another half hour proofreading it. I don't think it's great, but hopefully when the others review it, they'll be able to do what I can't. While I was writing, I was reminded of a paper that I'd written during my own freshman year. I did a good job with it and this one has a lot of similarities - completely different topic, but it made me feel a bit more comfortable.

- 6 This week's meeting was uncomfortable. I thought the rest of the group would be able to help me smooth out the rough parts of my piece, but it turned out everyone had similar rough spots. No one was really able to make his or her piece work quite right. We had to rethink our whole approach.

Anika once again brought out her initial preference from last time, but Alex was a step ahead of her and pointed out where we'd run into the same problems that way. After listening for a bit, I told the team about that paper I'd written two years ago, because it seemed relevant. Alex jumped on it immediately. He said he thought it was a really good idea and could work well - especially in light of the past two weeks' in-class lectures.

Natasha and Anika joined in and modified the outline. There were a couple of places where I was able to offer some suggestions and help, too. About halfway into our meeting, we started looking back at the pieces we'd already written to see if/where they still fit. It looked like we would be left with about half a paper still to write.

This time, we each took pieces that were left to write. I didn't care which parts I took, but Anika and Natasha sure did. It seemed like they argued about almost all of them, but ultimately we all wound up with pieces we could handle.

One of my parts was pretty straightforward and I wrote it in half an hour, but the other one gave me a lot of trouble. For some reason, I just couldn't make it work properly, so I set it aside. The next night I still couldn't seem to get a handle on it, so I contacted Alex to see if we could work it out together.

We met up for about an hour and he answered all my questions. We then looked at his work. I often couldn't understand what he was saying and needed to ask him to explain things more thoroughly. I felt pretty stupid, but he said that I helped him and sounded sincere.

- 7 I was late this week by about ten minutes because I had a study session for one of my midterms coming next week. However, I was only the second person to arrive. Natasha walked in five minutes later, out of breath from running to the meeting, and Alex didn't arrive for almost half an hour. Both of them were coming from midterm preps.

In spite of this, everyone was happier with what we had this week and, after running through what we had, the paper is starting to look pretty good. We spent much of our time assembling the pieces into a single paper. When we did, we realized that neither the introduction nor the conclusion worked very well any longer. Natasha asked that I write the introduction, saying that the new structure of the paper was my idea, but it wasn't. They were the ones who put most of it together - all I did was mention a past project I'd done. I said I'd do it only if one of them would review it the following week. Anika said she'd be happy to.

Alex volunteered to rework the conclusion, but Natasha quickly asked him instead to proofread and format the document while she rewrote the conclusion. He was happy with this. I'm glad, because his writing is pretty bad. Hopefully he does a better job with editing. Anika said she'd proofread the document as well - just to have an extra set of eyes on it.

Natasha also told us she'd be late next week because one of her midterms would run until the start of this meeting.

Writing the introduction wasn't really very difficult at all, and only took me half an hour - I just hope it's what they're looking for. I re-read it later in the week to make sure I couldn't improve on it, but it still seemed OK, so I'll just wait to hear what my teammates say.

- 8 While Alex may not be good at making sure he puts all the right details in himself, he is good at making sure everyone else puts them in. He found all sorts of issues all over the paper. Most of them were pretty small, but a few would have to wait for after we turn in the draft next week. They weren't horrible or anything, so that's fine. He also made the whole paper look exactly the way the instructor asked us to (at least as near as I could tell). It looks very professional. Anika also did a good job and noted a few things that Alex missed, but she also missed many of the items that Alex found. Why couldn't Alex do this with his own work?

Natasha showed up just as we were finishing up with Alex and Anika's work. We took a look at my introduction, and Anika asked why it was so short before she even read it. I didn't know what to say, so I just shrugged and they read it. They were all quiet for a moment until Natasha shrugged and admitted that she couldn't think of anything that was missing and Alex agreed.

Anika thought for another moment and then she, too, agreed that nothing was missing. She had some ideas for beefing it up a bit, though. Ten minutes later, we had a new version that was longer and felt a bit more complete. Her conclusion looked great to me, and only Alex made a suggestion.

When we were done, Anika said she'd add in the conclusion, make the changes we talked about and have a version of the paper ready to turn in next week in class. Natasha said that she'd try to make the larger changes that Alex suggested. I wasn't sure what I could do this week because we seemed to be in pretty good shape, but I said I'd start building a PowerPoint for the upcoming presentation. Alex asked if anyone minded if he didn't do anything this week because he had a late midterm next week in his toughest subject.

I don't know what I was thinking when I volunteered for the PowerPoint. I had no idea what to put in it. After staring at a blank presentation for about 20 minutes, I took our outline and made slides for each major topic. Seeing this, I rearranged it a little bit and added in some sub-headings, but mostly I didn't do anything with it.

- 9 Anika not only brought a copy of our paper to class for the instructor, but also brought copies for each of us to look at between class and our meeting. This way, we didn't waste our meeting time on reading through it. As a bonus, Natasha had merged her changes into this latest version. She'd unfortunately had a difficult time making those changes and they were not complete. She brought a list of questions and possible answers and we spent twenty minutes on that before we came to any answers.

Alex was pretty quiet during the discussion. At one point, though, he said he thought he had an idea after seeing what Natasha had done. He asked if he could take it home and work on it for next week; no one argued with that.

We next discussed the presentation - beginning with the PowerPoint I put together. Before Anika could comment, I pointed out that this was just a start and that I knew there wasn't much to it. I said I thought everyone should claim a few slides and modify them when they worked on what they were going to say. At this, Anika just shut her mouth and I have to admit, that was pretty satisfying. It felt good to anticipate her questions and head them off.

Natasha chose a few slides, including the first one, but I said that I wanted to introduce us. I don't think either of us had a very good reason for wanting to begin the presentation. Neither Alex nor Anika had any opinion on it, so we decided that we'd both give it a shot and see which one we all like best when we practice next week. I'm kind of excited about making it into a bit of a competition.

I spent a lot more time on the introduction slide than I did on the others this week, but I didn't completely ignore them. I built out my slides a bit with some clipart and a few more bullet points, but they were pretty good as they were. For the introduction, I included little photos of everyone and had them bounce in. Then I animated the quick overview with "whoosh" effects. It's a bit cheesy, but I like it.

10 So, maybe I should have spent some more time on what I would say in the introduction and less time on the slides (I think I went overboard). Natasha will open the presentation and I feel pretty dumb. On the plus side, they liked using the little photos of us all and they didn't hate the "whoosh" effect - but we're not keeping it, either. Everyone else sounded so much better than I did and I feel way out of my league.

I did get a lot of good suggestions, but they all seem so obvious that I should have known them. They all had recommendations for each other, too, but theirs didn't seem nearly as obvious as mine. I was really feeling like I could handle this, and then they showed me just how much I don't belong here. Anika seemed especially disappointed.

After class, Alex hung back and offered to help me fix things this week, but at that moment, I couldn't imagine how anyone could possibly fix my awful performance, so I said no.

When I got back to my room, I regretted it. I realized it's way too late to drop the class. I should have said yes, but I figured what was done was done. I'd just have to try hard not to let them down too much again. I made all the specific changes they suggested, and I practiced about a billion times for anyone who would sit still long enough. I swear, my roommate and my mom must have my part of the presentation memorized at this point, but I will not let my team down again.

- 11 In class, the instructor returned the drafts, and we met briefly during class to review it. There weren't many comments. Most of them were pretty minor or issues that Natasha had already fixed. There was one comment that concerned me, though: *a diagram might help here*. I can't believe that this was the first time I realized we were presenting our instructor with a great big wall of text! How could I have missed that? I took the document home and sketched out ideas for four diagrams I felt would help us to communicate our point.

I got to the meeting late, and everyone was already talking about our complete lack of images. I apologized and pulled out my sketches, and everyone's faces lit up. My sketches weren't very good, but I think they helped everyone to come up with better ideas. After 30 minutes, Natasha (who is a much better artist than I), had three good diagrams to work with. She said she'd be happy to build them out and add them to the paper for next week.

We spent the rest of the meeting working through the presentation, and everyone sounded better this week. Anika even commented that mine had improved dramatically. I noticed a bunch of mistakes, but no one talked about them. Feeling better about the presentation, I was better able to listen to their parts and offer them feedback. I noticed that Alex was speaking too quietly, while Anika was a bit too fast.

Alex included something that I didn't remember from anywhere in the paper. He told me where he'd found the information, and I believe him because he's got a great memory, but I wasn't sure that we wanted to talk in the presentation about something that we didn't mention in the paper. Natasha and Anika didn't think it was a big deal, but I feel like it's a bad idea. If it's important enough to talk about, shouldn't we write about it, too? Isn't this supposed to be a presentation of what we've learned? I asked Alex to add it to the paper, but he didn't think it was necessary, and neither did Anika or Natasha. I think everyone's getting tired and just wants to be done with this. Finally, I just said that I'd add it into the paper myself.

I only spent half an hour making the small addition to our paper and practicing this week.

- 12 The images Natasha put together really added a lot to our paper and I can see them making it easier for people to understand some aspects of it. I also claimed one of the images for one of my slides, because it would speak so much better than the bullet points I had on there. I can't believe we didn't have any images in at all until now.

This week the presentation was much better. After another three practice runs, it sounded smooth. Alex was consistently speaking loud enough to be heard by the audience and we'd slowed Anika down. I was a little bit frustrated to find that, after our argument last week, Alex removed the bit they forced me to add into the paper. It's not as though it's out of place or that it needed to be in the presentation, but why couldn't he have just gotten rid of it last week when I asked him about it?

Natasha added the photos of us to her introduction slide, and I have to admit, her intro was much better than mine. Finally, and arguably most importantly, we managed to cut it down to the correct time.

I practiced a few more times during the week when I was able to find a moment.

- 13 The presentation went OK, but not quite as smoothly as I'd hoped. Alex seemed a bit nervous and got quiet, but I'm pretty sure that most people heard him. Anika, on the other hand, raced through her presentation and as a result, I don't think anyone understood her. We wound up finishing up about 30 seconds early - I can't imagine that's a good thing.

Our classmates asked some good questions, which showed that they understood most of our presentation. Anika, who spoke last, naturally received all the questions, but she handed them off to whomever she felt was best suited to answer them. There weren't a lot of questions, but I got to answer two and I felt good about being able to do that in front of our instructor.

We should have discussed clothes beforehand. I came slacks and a sports jacket, and Natasha wore a dress skirt and blouse. Alex and Anika were dressed very casually, and it was a bit uncomfortable.

Generally, though, I think we felt good about the work we'd done. I expect positive feedback and good grades.

We only met briefly this week because we were mostly finished and we all had finals to study for, but Alex said that he had time to go through it once more. Quite frankly, he's the best person to do it, so no one disagreed. We also agreed that we'd only meet briefly next week to make sure Alex didn't find any huge problems.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. As we went through it, Anika took issue with a few of the changes Alex made. It didn't seem like anything until she pointed it out that some of the language he used was a bit ambiguous, and it could be read to mean the opposite of what we intended.

It took us all a while to see it because we all know what we're trying to say, but once I saw it, I couldn't un-see it. Alex seemed to have the hardest time of it, and he hesitantly volunteered to fix it before submission, but we could all see that was a bad idea. Anika said she had no problem doing it as long as everyone trusted her, because there wasn't enough time for her to make the changes and get us all to say OK in time. Of course we all trusted her and said so.

The night before she sent it in to our instructor, Anika sent us a copy of the document to make sure we were all OK with it. I didn't have a chance to read it carefully, but I wrote back and said OK.

Appendix J: Group domination narratives

Week **Anna**

- 1 In group time the first week, we began by setting up weekly team meetings. The rest of my group are freshmen and they're all nervous about this "huge project" but, as a sophomore, I've already done lots of them. It's clear that if I don't provide a lot of guidance, I'll wind up writing everything myself at the end.

The project looks fairly open-ended, so we brainstormed topic ideas for most of the time. I suggested some that I thought were pretty obvious and everyone seemed really impressed, so I told them I'd done this sort of project before. Jose tried to be involved, but the two ideas he suggested were pretty mediocre. When Sam spoke, I wasn't sure if he was serious or not. His suggestions were kind of funny, but I'm not sure that was his intent - he definitely has a unique approach. Kim mostly just listens; I guess she's shy or maybe just getting comfortable. Everyone focused on trying to improve on my suggestions.

Before the meeting ended, we narrowed it down to five ideas. I recommended we each look for resources on one topic, report back next time and then select a topic, and everyone thought this was a pretty good idea. I spoke up for the topic that was most interesting to me - I'd already done some work on it for another class. Sam spoke for another and, after a moment, Jose took another - but he didn't sound thrilled about it. Kim said she'd take the last two, but that seemed like too much for her, so I said I'd take it. She surprised me by insisting, so we compromised and split it. She seems nice but hasn't said very much and I don't know what to make of her.

The research for this week took me about an hour. I've got tons of materials on both topics because I was able to use some materials from the other class, as well.

- 2 We began the meeting by going over the materials we'd collected over the last week, and it was very disappointing. I'm glad Kim and I split that last topic or the group would have junk for both of hers - she's clearly out of her depth. To be fair, though, it seems that neither Sam nor Jose did much better. There are some things that we can use, but I can see they barely read any of what they found. As a result, we spent most of the meeting talking about how I conducted my research and vetted the results. Sam didn't even understand why what he found wasn't useable, until I asked a few questions about the topic - things that we'd need to know for the paper - and where he found the answers. Of course, he could only answer one or two of them. I then went to my own notes and answered the same questions for the topics I took, and then he seemed to understand.

When I pointed out that they should redo their research for next week, Sam actually suggested that the group just go with the topic I researched since I'd done such a good job with it (again, not sure if he was serious). I argued that this is obviously no good, because they still won't have any idea how to do the research - and this might not be the best topic for us, anyway. Ultimately, they agreed and decided to redo the research for next week.

We ended early and Kim stopped me as I was about to leave. She told me she thought I was rude to Sam by laughing at him, and we had an argument. I explained that I wasn't being mean, I was just trying to help everyone get the most out of the class! I wasn't trying to be mean - I thought he was joking! I told her I'd try to be more sensitive in the future, and she was OK with it.

Since my materials were fine, I didn't have anything to do this week, but I did spend about half an hour looking for materials for the other topics to help them out.

- 3 In this week's meeting, we sorted through the materials we'd got to evaluate them and decide on a topic, but it was tough to come to agreement. They'd all brought better materials this week. I feel like I never should have pushed them to redo their research, because Sam came back loving his topic, even though the materials available for it were pretty weak. Even worse - he convinced Kim to agree. I don't know how that happened, because I pointed out that the materials available were really thin and there really wasn't much on which to base a paper. On the other hand, Jose, who didn't much like his own topic, agreed that the topic I'd initially selected was the best of them - it's got the best resources available, as well. The discussion went on for most of the scheduled meeting time, and ultimately the group settled on the topic I'd researched. I'm not positive that Sam's really on board, but he did say 'ok.'

After the topic was settled, I started drafting our outline and everyone joined in. It became clear pretty quickly that I'd have to teach them how to structure a paper properly. Even afterward, Sam proposed some odd ideas that he said would make it more interesting. I had to explain that, while that was great for fiction, this was needed to be professional. Again, he gave in, but I'm not sure that meant he agreed. Jose suggested we split up the source materials among ourselves, look for a few more, write what we can about them and bring that back next week. It wasn't a bad idea, but as soon as I started assigning them, everyone got upset with how I was doing it, so I asked them to claim one they wanted until there were none left. This worked pretty well, but Jose took one that was really too complicated and difficult, so I offered to help with it; this seemed to upset him.

I spent about another hour taking notes this week. I took some notes on that piece for Jose, but he never did get in touch with me to work on it, so I figured I'd bring them to class and give them to him there.

- 4 Jose was obnoxious in class about the notes I'd put together to help him. When I handed them to him after class, he looked at me like I was crazy. I don't get it, but he did take them.

Jose and Sam were late to the meeting this week, but that's not such a big deal. What wasn't OK was that Sam forgot to write summaries for two of the five parts he was supposed to bring! No one else seemed to care until I reminded them that we only had one week left before we turned it in. It's a shame, because he did a great job with what he did write. Jose seems to have completely ignored all the notes I gave him and a quick glance at his summaries shows that he doesn't understand what we're doing with this paper. It's not garbage, but there is a lot of work left to do. Kim did an OK job on her parts, but, while they are OK for next week, they are on the short side and she didn't think about the outline at all or where her summaries might fit into it. It's going to take a lot of work to build this out into a paper.

Naturally, everyone was surprised to see my summaries because they were much more complete. Also, no one else had thought to include pointers to the sections where they should be used in our outline. Unfortunately, with this due next week, there's no time for them to fix theirs. Sam said he'd put everything together for what we need to turn in, since he still has to write a lot of his materials. I told him to send it to me so I could look at it before we turn it in.

Next we talked about the outline and Kim had some really good ideas for improving it. Everyone agreed, but Sam complained that it was too much for him to do for next week and asked that we just make a note of it and make the changes later, but this won't get us the feedback we need from the instructor. Anyway, he's the one who didn't do his work for this week... Kim stepped up, however, and offered to make the changes if Sam could get the rest of it done by the middle of the week. Sam agreed. I really hope I can trust them to do it right.

Before we left, I reminded everyone that we need a completed draft ready in another four weeks and that they should build out their summaries to look more like mine for next week. From the looks on their faces, it seemed no one else realized this was necessary, but no one argued.

There wasn't much for me to do this week outside of the meeting, so I focused on my other classwork.

- 5 Kim was a little late, but turned in our paper in in class. After class, the instructor allowed some time to meet for group work, and we reviewed Sam and Kim's work - they explained that they met up in the middle of last week after Sam had done his part and worked on finishing everything up together. There wasn't a lot of time in class and it looked ok. I pointed to a few problems, but there weren't a lot of comments.

Everyone was happy to see the paper starting to take shape and we discussed what we should do next. Sam suggested that we each build out the summaries we'd been working on, but I had to point out that that wouldn't work, because some of them would appear all throughout the paper. I was about to speak, but Jose had arrived and heard us talking about what came next. He said we should just wait for the feedback from our instructor, anyway. He argued that we should take the week off, instead! The worst part was that Kim and Sam also thought this was a good idea.

I had to explain that the first assignment was basically just to make sure we were moving forward. I also told them that, in my experience, it often took weeks for them to get this sort of thing back to us; if we waited on that, we'd never have the draft completed in time. I can't believe they didn't know! Also, it's getting toward mid-term time and we'll appreciate the extra time to study later if we finish most of this now.

I told them we have to keep moving to get this done. That meant splitting the paper into four pieces and each of us taking one - we could save the introduction and conclusion to be written after the rest is in place. Eventually they agreed to this.

I took the last quarter of the paper and spent a lot of time working on it this week. The topics in this part were mostly done by Sam and Jose, and I had to fix many major problems with Jose's work. He's trying, but doesn't really get it. I had to review a bunch of the materials to see what they were really saying and then redo everything. He misinterpreted the materials and was therefore arguing the wrong point. He probably won't even recognize much of this as his work.

- 6 Sam and Kim were again there when I arrived this week, but Jose was not. We started by looking at Kim's work. It was well written and she's made some good observations that I hadn't even thought of. We spent some time exploring those observations further, and it gave me some ideas to add to mine. Sam's looks fantastic because he included some great visuals that made it easy to understand what he was trying to say - he should be an illustrator. This started us talking about where else we might be able to add images to strengthen our paper. We came up with a diagram and a graph that would really help, and Kim volunteered to take the graph, but I don't want her to be overloaded since I'll probably ask her to do much of the proofreading and formatting. Plus, Sam's obviously good at it. So I asked him to do them both, and he seemed happy.

Then Jose showed up, about fifteen minutes late, saying his coach had been holding the team late to prepare for their upcoming game. We moved on to the part of the paper I'd rewritten and Jose was angry because he didn't understand why I changed his part of it. I said that what he had put together had helped me orient myself, but that I'd had to make some changes so it would all make sense and work toward the same vision. He responded that it was my vision and not the group's. Then Kim spoke up to say that even though the paper is much different from what she thought it would be, it was clear that I had a lot of experience and that the paper was turning out well. After that, Jose admitted that he was going in a different direction and asked us to think about writing the paper that way - he thought it was valid. So we talked about the problems we might run into (not the least of which being that we'd have to do a major rewrite). Ultimately, he gave up and stayed on the same path, of course. Obviously, we didn't look at Jose's work because he would have to make some major changes to it, anyway.

Since none of their pieces are really finished and I had some things I wanted to add to mine (thanks, Kim!), we decided to each spend another week with our own parts. I volunteered to write the introduction and conclusion, as well. My own additions took me longer than expected - I spent about an hour on it.

- 7 Jose was late again this week. It was only about five minutes this time, but it's getting to be a habit and he said the game was last week, so I asked him to please try to be on time in the future; he glared at me. He reminded me that his coach has been keeping him longer lately and then added that it didn't matter because I was doing the whole project anyway - that it didn't make much difference if he was there or not. How am I supposed to respond to that? I reminded him that it's a group project and that we're all working toward a shared grade on this. Really! Am I supposed to apologize for being more experienced? Kim stepped in at this point to calm Jose down. She confirmed, and asked me to confirm that we were working as equals on a group project.

Everyone's pieces looked much better this week - especially Jose's, which was pretty much entirely rewritten. While Sam's very good with visuals, his writing skills leave a lot to be desired. At first, I was making a lot of comments and corrections, but then I gave up and told him that I'd take it and fix it for next week. He was fine with that. Everyone seemed to be pretty happy with the way the paper was turning out, in fact - even Jose.

I suggested that maybe we might want to trade pieces to proofread for next week and then end early. Nobody was opposed to this, and I'd already volunteered to take Sam's work. Kim said she'd assemble the four pieces for next week so we could see the whole thing together. I wasn't comfortable with this because we would all be looking at our pieces separately this week, and it wasn't fair to make her do all of that. However, she pointed out that we could still make our edits to the pieces in the larger paper and she was volunteering to make the changes in the final document, too. So, since I couldn't think of any good reason why we shouldn't, we went with it.

Jose asked that we change our meeting time for next week because he has some study sessions to attend. Sam asked if we might even be able to cancel it, since we've all got mid-terms coming up and our paper is looking like it's in pretty good shape; Kim agreed with him. Naturally, no one remembered that it was my planning and organization that put us in such a good position. We decided to change next week's meeting to fifteen minutes immediately after class; it will be primarily to pass around the updated document and our corrections.

It took me a while to get through Sam's work, and I had to rework a lot of it. All told, it took me about an hour.

- 8 During this week's class, some of the discussion touched on the topic of our paper, and Jose and Sam both were active in the discussion. This led to some lively debate, and it became clear that there were competing points of view within the classroom.

After class, we met briefly as we decided last week. Kim did a good job of not only integrating her own work into the paper, but cleaning things up in general. She seems to have a real knack for that. She moved some things around throughout the paper, and it's a real improvement. She's also applied the formatting throughout the document and it's looking good. Jose and Sam were also impressed. Kim put a lot of work into it. The changes made it difficult, however, to distinguish one piece from the other. We decided we should look through our high-level comments and feedback to see what still makes sense to incorporate, and then hand the detail work back to Kim to apply in the new version. Most of the changes ended up being work that Kim had already done.

Then, Sam brought up the class discussion and asked what we should do about addressing the other viewpoints. While we probably should mention them, Jose looked at this as some sort of vindication of where he was going originally (that I corrected). Worse yet, Sam agreed! Our existing approach showed we are creative and thoughtful, rather than just parroting the textbooks. When the discussion stretched on, I suggested that maybe we should hold our regularly-scheduled meeting to finish the discussion. No one wanted to do that. I offered instead to add in a note explaining the other perspective, and Sam really liked this idea. He explained that he really likes the direction we've taken the paper, but that he was nervous that we'd look like we'd completely missed that alternative perspective. He's got a really good point, too. This got Jose on board, but he wanted to write it. I said *no way!* His other work has been sloppy, and I said I wouldn't risk turning in something unfinished, even if it is just a draft. Kim told him that if he could get it to her by mid-week, she'd include it in the draft she was preparing. On our way out, I caught Kim and asked her to be sure to keep the note brief.

I didn't have anything to do outside of class this week, so I focused on my other class work.

- 9 Kim had our paper ready to be submitted when she arrived in class, and she also brought a copy for each of us to look at afterward, but we didn't meet because both Sam and Jose had already left. I was really hoping to have a chance to go through it together, but that was probably best because it gave me a chance to look over the whole paper. Although it integrates nicely, I thought that Kim would keep Jose's brief note *brief*; instead, it adds almost a full page.

About ten minutes into the meeting, I started to get up and leave because I was the only one there. Just then, Jose arrived and asked why I was leaving. It seems that Kim told Jose and Sam she'd be late to the meeting, so they decided to just meet later instead - but no one thought to tell me. When everyone finally arrived, I tried not to make a big deal, but I was pretty upset.

I pulled out my own changes to the document and no one questioned any of them. They were mostly minor at this point, but I did trim down some of Jose's *note*. No one said anything. I asked them to please take another look at the paper this week, but I doubt they will. If they do, they probably won't see anything. I guess everyone is exhausted. Maybe they hate me?

Our next task was to begin preparing for the presentation. We drafted an initial PowerPoint, and they all just accepted the assignments that I suggested - they pretty much followed the parts of the paper they'd each written. I expected there to be some discussion, so I asked if everyone was OK with it. They said it was fine, so I guess they are. We all agreed to start working on our talking points and our slides in the deck.

I am very comfortable with my topic, but that translated into it running about twice as long as it should. It took me two nights to get it to something workable because I had a lot of other projects to work on, too, and I just couldn't focus.

- 10 We spent the first fifteen minutes practicing our presentation - the one that's only supposed to take seven minutes! Have none of these people ever presented anything before? Jose talked for five minutes about everything but his topics before he introduced Sam. Sam, in turn, had the smart idea to add the diagrams to the slides, but then proceeded to describe the images, rather than the story they are supposed to tell. I have no idea what Kim was talking about since she seems to be so petrified of public speaking that her voice never got up above a whisper. By comparison, I thought mine was pretty decent. I may not be the best presenter, but at least I stayed on topic and close to the time limit.

We spent the rest of the meeting working on the presentations. Fortunately, I wasn't the only one criticizing and pointing out flaws. Each

of us (including me) took home a bunch of things to work on before the next meeting if this presentation is going to run smoothly. I have to slow down and rework a few phrases that didn't make sense to them when they heard it. Also, after seeing what Sam put together, I've got some ideas for improving my slides.

I actually spent another hour and a half just practicing my part - and that was after about half an hour of reworking.

- 11 In class, the instructor returned the drafts to the groups, and we met briefly during class to review it. The instructor left only six comments in our paper - glad we didn't wait on that! One comment read, "Interesting approach! I like that you reached beyond what we did in class." The comments clearly favored the results of my guidance (in contrast with the direction Jose was pushing for). Another comment complimented the images. One of the comments indicated a need to further develop a section and another asked us to recheck one of our references.

Our meeting opened up very strangely, as Jose completely misinterpreted the instructor's comment. He thought the instructor was complimenting the fact that the document took what we talked about in class a bit further. It took me a while to understand that's what he was thinking and then I tried to gently help him understand the truth. Eventually he said he understood, but I'm not sure that he really did. Sam and Kim both stayed out of that disagreement and were quick to move on afterward. I told them that I'd make the requested changes this week because I'd already started.

The presentations were better this week, but we still need more practice and a bunch of rework. Jose changed his part in response to what he thought the instructor was saying, but I'm not sure I can convince him to fix it completely. He did say he'd change it some to make sure it's still in line with what everyone else wrote, and I guess this is OK. We do have the *note* in the paper, so I guess he's got that covered. Sam and Kim had both fixed some parts of theirs, but we spent most of the meeting fixing other parts. We also talked about how we should dress for the presentation. Kim had an elaborate costume idea that was completely unprofessional (and I hate dressing up in costumes). I said business casual. When we ended the meeting, I reminded everyone that our presentation is in just two weeks.

Reworking the paper this week took me about two hours, but I didn't mind. If I hadn't done it, it probably would have been wrong. Also, the

instructor was right about the reference - I'll have to ask Sam what happened with that and if he's able to track down the correct reference. I'm glad my part of the presentation is finished now.

- 12 We had to start without Kim this week because she left a message with Jose that she'd be late due to a meeting for another class. The group spent some time reviewing my changes to the paper. I asked Sam about the incorrect reference and he just laughed and rifled through his notes. He explained that it was just a placeholder he threw in while he was writing, and he never got around to removing it. It's pretty funny that it stayed in this long without anyone noticing. I continued and both of them were fine with my fixes.

Kim arrived just as I finished looking at the changes. She asked to take another look, but I asked her to look at it after the meeting, instead, so that we would have time to practice the presentation again. None of them made many changes - even Sam, and that's annoying - but the presentation felt much better this week. They must have practiced a lot. After two practice runs, it sounded smooth. While it's still running too long, we agreed that everyone will probably speak faster in class and the instructor probably won't be a stickler on time.

We decided to end early this week. I reminded everyone to wear formal business clothes to the presentation next week.

I practiced a few more times this week, but mostly I was free again to work on my other coursework.

- 13 We were the only group dressed professionally, and I think that probably earned us some points. Kim managed to speak loudly and clearly enough that the instructor only had to ask her to speak up once. Jose stumbled on his first few sentences, but he quickly relaxed and did a great job. The biggest surprise, though was Sam: he added an analogy at the end that not only tied everything together, but it also made everyone laugh. It was unexpected and risky, but it worked out well. There weren't a lot of questions for us, and I stepped forward to direct them to the best person to answer.

I think we can expect positive feedback and good grades.

Since the paper is mostly finished, we all decided to skip this week's meeting and each give the paper one last review for the following week.

- 14 At the final meeting, we compared notes and found that we had no major changes to make. Kim took all four versions and said she'd make all the changes and then submit it at the end of the week. I asked her to send it to me first because I want to take one last look at it. She was annoyed by this, but she agreed.

When she got me the paper, there were no changes to make, but it felt good to give it a final review and submit it.

Week Jose

- 1 In group time the first week, we began by setting up weekly team meetings. I think we got lucky, because Anna is already a sophomore, while the rest of us are freshmen. It seems like she knows what she's doing.

The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time. I suggested some topics, but they weren't nearly as good as Anna's ideas. I knew they weren't that great before I said them, but when I caught a glimpse of Anna's face when I said them, I felt dumb. She told us that she's done this sort of thing before. Thankfully, everything I said was sort of overshadowed by Sam's contribution that no one knew how to respond to. When he speaks, I can't tell if he's serious or not. His suggestions are kind of funny, but I'm not sure that's his intent - he definitely has a unique approach. Kim mostly just listens; I guess she's shy or maybe just getting comfortable. Soon, everyone focused on trying to improve on Anna's suggestions.

Before the meeting ended, we narrowed it down to five ideas. Anna told us we should each look for resources on one topic and then report back next week. She spoke up for a topic she'd already worked on in another class. Sam quickly spoke up for another and, then I chose the most interesting one that was left. Honestly, though, I was disappointed because I liked the one Anna chose, but I'll give this a shot. Kim said she'd take the last two, but I guess Anna's concerned, so she offered to take one herself. Kim insisted, though, that she can handle it, so Anna split it with her. I'm nervous about Kim, too, because she hasn't said or contributed much, but that's fine. We've got time.

I spent about 45 minutes researching my topic this week and I found a lot of materials, so I feel pretty good.

- 2 We began the meeting by going over the materials we collected over the last week. Anna was clearly disappointed, and she didn't hide it well. She spent most of the meeting talking about how she did her research. It was helpful, but makes me feel like I'm a child. I'm going to have to do a lot of it again. Sam asked some questions indicating that he didn't see why his materials are mostly unusable, and Anna just laughed at him. He asked again and this time Anna responded with a few detailed questions that Sam couldn't answer. She then went to her own notes to answer the same questions. It seemed a bit cruel (and I'm glad it wasn't me) because I couldn't have answered those questions. Sure, they are important and all, but we're new to this and she's not. She's already worked on this topic before.

I suggested that, in the interest of time, maybe we just go with the topic she worked on, but Anna insisted that we redo our work. She pointed out that we all need to be able to do the research. No one could argue with that, so we said we'd redo our work.

The next night, I spent about another hour and a half finding and skimming through new materials. I was still able to use most of my original materials. I found a bunch of additional ones, too. I don't love this topic, though, so it feels like a waste of time.

- 3 During this week's meeting, we sorted through the materials to decide on a topic; we have much better materials this week. It turns out that Sam's topic is really cool, but it was clear Anna was more interested in her own topic. So was I. It's really got the most potential, and we've got the best resources for it. We went back and forth for most of the meeting and it was a pretty good debate, but in the end, I thought Anna's topic was best, and Kim wound up agreeing with us (even though she started out siding with Sam). After Kim changed her mind, Sam agreed to go along.

After the topic was settled, there wasn't much time, but Anna jumped right into drafting an outline, and she wouldn't let anyone else help. Sam had some interesting ideas about how to make the paper easier to read, but when he brought them up, Anna took it as a sign that none of us had ever written a research paper before. We all had to sit through her explaining to us what an outline is and why we use it - that's ten minutes of my life wasted. No one made any comments on the outline after that.

When I suggested that we each take a few of our sources, search for more content on our own and then write up summaries for next week, Anna agreed and started assigning them out. She acted like she was the only one with a brain, however, and she didn't trust the rest of us to get anything right, so she took the materials that were actually interesting and offered any depth - strange, since she made such a big deal out of making sure we were all "learning" during the initial research. I wasn't the only one upset - Kim spoke up first to request a specific topic, and then Sam and I did the same. This clearly irritated Anna, but eventually she gave in and we each claimed the ones we most wanted. This seemed fine and I took one that I thought I could make into something interesting, but apparently Anna didn't think I could handle it. She told me she'd "*help*" me with it - like I'm incompetent or something. I just said OK and moved on - she can do what she wants, but I'm writing it.

I spent about two hours on reading, searching and writing summaries. I like how it turned out.

- 4 After class this week, Anna handed me her "*help*" - her completed summary was even longer than mine! Does she think I'm not competent to write anything? I wasn't sure how to respond; I just kept thinking this couldn't really be happening, but when I realized it was, I took the paper and walked away. When I got home, I found that she'd pulled out completely different main points. I can see that this is where she's going, but my approach is just as good, and I didn't have time to make any changes to what I'd written, anyway.

I was a bit late to the meeting, but it was only about five minutes and Sam was just arriving when I walked in. I can tell that Anna wasn't thrilled with what I brought, but she was more upset that Sam didn't finish his part. She was particularly upset because she thought we were writing our completed portions to be added directly into the paper - and apparently no one else thought this. What does she expect? She tells everyone what to do because she's got more experience, but then she doesn't explain what she means - assuming that we have the same experience that she does. Kim called her out on this, asking why she wrote so much already when we're so early in the project. After all, we only have the preliminary structure done, and this is only the fourth week of class.

Anna got upset and asked how she would be able to put anything together using materials as thin as this; that's when Sam spoke up. He made a joke about how poorly he'd done his part - his wasn't just thin, it was nonexistent. It wasn't that funny, really, but everyone laughed and he volunteered to assemble next week's assignment since he still has pieces to write. He also suggested that we take a look at what we've got and whether the outline we put together still fits. It was really either that or fight for another hour, so everyone was all for it.

The discussion was OK, and Kim offered some really good ideas about how to sequence things. It helped me to see the paper differently, and it gave me some more ideas. Anna agreed that the sequence is a good idea, but Sam quickly pointed out that he wouldn't have time to do it all, and Anna started getting upset again. I also don't have time to help out; fortunately, Kim offered to make the changes if Sam could get the rest of it done by the middle of the week. Sam gladly accepted this, and they decided to coordinate later.

Naturally, before we left, Anna had to remind everyone that we need to keep working on our summaries because we've got the draft due in another four weeks.

I spent about half an hour on my sections this week, but I mostly focused on my other classes.

- 5 Kim had our assignment ready and turned it in during class. The instructor allowed some time at the end of class this week, so we reviewed what she and Sam put together. It seems they met up in the middle of the week and finished it together. Anna was pleased with their work, so the meeting went pretty smoothly.

My coach kept us late all week to prepare for a home game against our rivals in two weeks, so I was about twenty minutes late. It was a tough practice and I was exhausted, so when I arrived and the group was discussing our next steps, I suggested we take a break from it for a week while we wait for feedback from the instructor. Sam and Kim seemed to think this was a pretty good idea, but Anna got upset. She spent the next ten minutes explaining that she thought the instructor probably would barely look at our papers, much less provide meaningful feedback. She said it'd probably be weeks before we got it back; by that point, we'd have no time left to get our draft together. She kept talking about how we couldn't stop now because of midterms, scheduling and all sorts of other junk. I gave up because I just didn't want to hear any more. I really could have used a break, but I guess she won't let us have one.

We split the paper up into quarters and each took a section to write up for next week. Before we left, I told everyone that I'd probably be late the next week because of our practices.

I had to spend about two and a half hours writing my part of the paper this week. I mostly had to work with Sam's contribution and just a bit of Kim's. Sam's contributions were difficult to understand. He had some good points, but the way he wrote was very confusing and took a long time to understand - sometimes it was easier to just go back to the sources. They also seemed to miss part of the point. Ultimately, I had to write most of it from scratch.

- 6 I was a little late again for our meeting this week because of practice. Before I arrived, the group went through Kim's and Sam's work. I didn't really get a chance to read either of them, but Sam included visuals in his and it makes a big difference! I guess that they all agreed and looked for places to add more.

Next, we reviewed Anna's. She sort of apologized to me for changing it to make sure it all made sense and worked toward the same point. As I read, though, it became clear that she rewrote almost everything I gave her. I recognize it, of course - it's all very similar to the "*help*" she gave me. I completely wasted my time and might as well not have written anything!

I answered that it was *her* vision and not that of the group. Kim spoke up and took Anna's side, saying she liked where the paper was going. I realized that it didn't matter what I said or did, because we were just helping Anna write her paper. It wasn't a *bad* paper, but it wasn't *ours* either. It was clear that I'd have to rewrite most of the work I'd done this week, so we didn't bother looking at mine.

As it turned out, I didn't have as many changes to make as I thought. It only took me about 45 minutes to fix it all up.

- 7 I was a little late this week because I think I pulled a muscle or something in my leg at practice. When I arrived Anna yelled at me for it. Couldn't she see that I was limping? Anyway, what did it matter since she was writing the whole paper herself? We started to get into it but then Kim spoke up to calm us both down. She made Anna confirm (out loud) that we are all equals, working on this project together. Of course, Anna had to remind everyone that she had more experience than anyone else, but Kim pushed us on anyway.

Anna was happy with everyone's work this week - especially mine. Of course, I'm basically just doing exactly what she told me. She was disappointed by Sam's work, and there are a lot of corrections to be made there, but it's nothing at all like last week. Anna told him she'd take it and rewrite it for next week. At this, Anna told us we needed to trade pieces and proofread each other's work for next week. Everyone was OK with this, but Kim wanted to get started on assembling the paper and volunteered to do that. Anna pointed out that it would be tough to match the individual pieces with the assembled document so that we could make the changes, Kim said she'd take care of it, so it was decided.

As we were getting ready to go, I asked if anyone would mind changing our meeting time for next week - I had a study session to prepare for one of my midterms. Sam agreed and asked that we cancel it, since the paper is in pretty good shape. Kim was on board. Anna decided that we should still meet, but only briefly immediately after class to share our changes.

I took Kim's piece and it was really in pretty good shape. I was able to read through it quickly and I had very few comments or corrections to make. I wonder if Sam will have much to say about mine.

- 8 During this week's class some of the discussion touched on the topic of our paper, and it felt good to have a lot to contribute in class. There was some good debate about the competing points of view - specifically, there was a lot of interest in what I had written but that Anna had removed. Sam, although usually pretty quiet during class, even got in on the discussion and made a few good observations, although I'm not sure everyone really understood them. I landed in a pretty smart group.

After class, we met briefly as we decided last week. Kim did a great job on the paper again, and Sam's diagrams were mostly spot on. One of them seemed odd, but I couldn't explain why. Fortunately, Anna understood and asked Sam to make a few changes in line with my comments. Sam said he wasn't a good enough artist, however. He said that he agreed with me and that he'd like to be able to do it, but he doesn't have the skill. I can't really argue with that, can I? Even like this, the diagrams really help to spruce things up and I didn't want to spend that much time on them, anyway - I was much more interested in the class discussion. Since Kim had done such a great job, most of our own comments and changes weren't relevant any longer, so we mostly just handed them to her to incorporate for next week.

When I wanted to talk about fixing our paper because the class was interested in what I wanted to say, Anna said it was boring and that she didn't have time to explain all the problems with it and asked if we wanted to hold our regular meeting to discuss it. Of course, we couldn't do this because we all had other study sessions to go to, but Sam also wanted to include my perspective. Finally, Anna gave in and agreed to add a section on it, but she wouldn't let me to write it - like I'd screw it up or something! She said that she didn't want us turning in something that was "sloppy" - my work is not sloppy! Fortunately, Kim spoke up and asked Anna if she'd be OK with me writing it if she reviewed it first. Anna was OK with that, so Kim asked me to get it to her by mid-week. I feel like a child, but whatever.

I wanted to make sure that Anna couldn't complain about it being "sloppy," so after spending an hour and a half writing the new section, I spent another hour proofreading it the next night before sending it to Kim.

- 9 Kim had our paper ready to be submitted when she arrived in class. She also brought a copy for each of us to review. I took a look that evening and Kim had done a great job of adding in my new section. She'd made a few changes to make it clearer, but mostly used what I gave her. I thanked her during the week and she appreciated it. She also told me that she'd be about ten minutes late to our meeting this week. I mentioned it to Sam when I saw him in a class we share.

Unfortunately, we took this as a reason not to rush to our meeting, but no one mentioned it to Anna. She was packing up to leave when I arrived. Oops. She seemed really uptight and stressed in the meeting. She's never been fun, but this seemed different - she must have been really angry.

Anna had a long list of changes to the paper and some of them were big, but no one said anything - I know I was feeling guilty and I imagine everyone else was, too. She asked us all to take another look at the whole paper and read it straight through for next week to make sure we haven't missed anything.

Our next task was to begin preparing for the presentation. Anna drafted a PowerPoint for us to use, and then assigned slides to each of us. At one point, she asked if anyone was upset with their piece and no one was, so she kept going. She told us we needed to write up our talking points for each of our slides and practice a few times in front of a mirror for next week.

I am pretty comfortable with my topic, and it didn't take me long to write down some notes on index cards. Honestly, I'm pretty good at public speaking, so I don't think I need to prep too much.

- 10 Wow! Anna found nothing but fault in my presentation! She pointed out everything I forgot to include and didn't seem to like anything about what I did include. To be fair, she wasn't the only one, but she was pretty harsh. No one else did a great job, either - including Anna. She might think she's much better than all of us, but even she had a bunch of things to fix.

Sam's slides looked better than everyone else's because he used a lot of the diagrams he'd drawn, but he missed a few important points that weren't represented in them. Kim's was probably the best of all, but she spoke very quietly to her notes, rather than to the audience. After three practice runs, everyone took home a list of things to fix their presentations.

I spent an hour and a half reworking my part - and then about half an hour practicing it.

- 11 In class, the instructor returned the drafts to the groups, and we met briefly during class to review it. The instructor left only six comments in our paper, but one at the front of the paper read, "Interesting approach! I like that you reached beyond what we did in class." The instructor clearly praised the section I got Anna to include. Another comment complimented the images. One of the comments indicated a need to further develop a section, and another asked us to recheck one of our references. I couldn't wait to see Anna's reaction to the instructor's comment! I even fixed my presentation accordingly.

Our meeting was frustrating because Anna wouldn't even consider the idea that the instructor's comment was referring to my addition. I can't believe I walked in thinking the paper would change the way I wanted it to. I walked out glad that I was able to keep any of my work in at all. Both Sam and Kim stayed out of the discussion. When I asked what they thought, they just shrugged. Anna said she'd make the changes the instructor requested this week.

Everyone's presentations were better this week, but we still need more practice and rework. Sam and Kim had both fixed some parts of theirs, but we spent most of the meeting fixing other parts. Anna had improved upon hers significantly since last week. I don't know how she did it, but it sounded perfect. Finally, we talked about how we should dress for the presentation. Kim had a cool costume idea that was in keeping with our topic that Sam and I both liked, but Anna said that would look unprofessional. She said we had to wear business clothes. When we ended the meeting, Anna reminded everyone that our presentation is in just two weeks.

Since I still had my old notes, it only took me about fifteen minutes to get my presentation back in shape again.

- 12 Kim let me know that she'd be late because of another meeting, so we started without her. We spent some time reviewing Anna's changes to the paper, and then she asked Sam about the reference we needed to check on. He just laughed and rifled through his notes. He explained that it was a placeholder he threw in while he was writing, and he never got around to replacing it with the correct one. I got the feeling that he left it in there just to see if anyone would notice it at all.

Kim arrived just as Anna finished looking at the changes. Kim asked us to take another look, but Anna told her to review it after the meeting, instead. Although it didn't seem like anyone made very many changes, the presentation felt much better this week. Whatever it was, after two practice runs, we sounded smooth. While it's still running too long, we agreed that everyone will probably speak faster in class, and the instructor probably won't be a stickler on time.

We decided to end early this week, but before we split up, Anna wouldn't be Anna if she didn't remind everyone to wear formal business clothes to the presentation next week.

I practiced once this week with a friend, but mostly I focused on my other coursework.

- 13 We were the only group dressed professionally, and I think that probably earned us some points. Kim managed to speak loudly and clearly enough that the instructor only had to ask her to speak up once. I stumbled on my first few sentences, but then I relaxed and I think it went well. The biggest surprise, though was Sam, he added an analogy at the end that not only tied everything together, but also made everyone laugh. It was unexpected and risky, but it worked out well. There weren't a lot of questions for us and naturally, Anna stepped forward to answer them.

I think we can expect positive feedback and good grades.

Since the paper is mostly finished, we all decided to cancel this week's meeting and instead each give the paper one last review for the following week.

- 14 At the final meeting, we compared notes and found that we had no major changes to make. Kim took all four versions and said she'd make what few changes there were and submit it at the end of the week. Anna asked her to send it to her first, because I guess she doesn't completely trust her. Kim was annoyed by this, but said she'd do it.

As far as I know, the paper went in on time as planned and I imagine we'll get a good grade.

Week Kim

- 1 In group time the first week, we began by setting up weekly team meetings. Anna's a sophomore and I think her experience is valuable, but she's also very pushy. Jose seems like he'll work hard, but I especially like Sam. The way he speaks is a bit strange because he uses a lot of big words. It doesn't seem like he's showing off or anything, he just thinks a lot about the words he uses. The trouble is that he often doesn't seem to use them quite right.

The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time. We all volunteered a few topics, but I didn't have any ideas, so I kept my mouth shut. I'm pretty sure that one of Sam's suggestions was a joke and one of them I couldn't understand at all, but one of them was a really good idea. No one seemed to understand any of them, and I didn't want to say anything. Later, I was surprised when Anna suggested the same thing as though it was brand new. I don't think she was trying to steal credit or anything, I just think she didn't understand him. Anyway, it's a good idea.

Before the meeting ended, we narrowed it down to five ideas. Anna told us we should each look for resources on one topic and then report back next week. She spoke up for a topic she'd already worked on in another class and Sam quickly spoke up for another. Jose eventually took another one and I said I'd take the two that were left. Anna didn't like that and said she'd take one of them, but I put my foot down - she's not going to walk all over me. Ultimately, we compromised and split it.

I spent about an hour researching my topic this week and I think we're off to a good start, so I feel pretty good.

- 2 We began the meeting by going over the materials we'd collected over the last week. Anna was clearly disappointed, and she didn't hide it well. She spent most of the meeting talking about how she did her research and it's a big help, but makes me feel like I'm a child. I'm going to have to do a lot of it again. Sam asked some questions indicating that he didn't see why his materials are mostly unusable, and Anna just laughed at him. He's braver than I am, though, because he asked again. Anna responded with a few detailed questions that Sam couldn't answer. She then went to her own notes to answer the same questions. It seemed cruel, and I'm glad it wasn't me because I couldn't have answered those same questions. Sure, they are important, but we're new to this and she's already worked on this topic before.

Jose suggested that, in the interest of time, maybe we just go with the topic she worked on, but Anna insisted that we had to redo our work. She pointed out that we all need to be able to do the research She was right - even if it's a pain in the neck. I just wish she was nicer about it. Sam and Jose also agreed with it.

After the meeting, I pulled Anna aside and told her that she was out of line in being so rude to Sam. It was uncalled for and I just couldn't stand by and let her do it. She pled innocent, though. She said that she honestly thought he was joking the first time, and she didn't mean to insult him. She said it wasn't intentional, but that she'll try to be more sensitive in the future.

The next night, I spent another hour finding and skimming through new materials. I was actually still able to use most of my original materials. I found a bunch of additional ones, too. I don't love this topic, though, so it feels like a waste of time.

- 3 During our meeting, we sorted through the materials we had to decide on a topic. There was some conflict between Sam and Anna - Sam pushed for the topic he'd researched, while Anna made up her mind that we'd go with hers. I didn't want to get involved, but as Sam explained it, it did sound like more fun. It had a lot of potential to let us touch on lots of different areas - but that's exactly why Anna didn't like it - she thought we wouldn't be able to focus ourselves. Jose is supporting Anna - I think he's scared of her. We went back and forth for most of the meeting and it was a pretty good discussion, but in the end, we went with Anna's topic. It's a pretty good one, and it's also clear that she will not give up.

After the topic was settled, there wasn't much time left, but Anna jumped right into drafting an outline and she wouldn't let anyone else help. Sam suggested something to make the paper easier to read, but Anna didn't like it and wanted to go with a more conventional approach. She figured that we just didn't know how to write a paper, so she spent about ten minutes explaining to us what an outline is and why we use it. No one made any comments on the outline after that.

Jose suggested that we each take a few of our sources, search for more on our own and then write up summaries for next week, so we're ready for the first assignment. Anna agreed and started assigning them out. However, she acted like she was the only one with a brain and didn't trust any of the rest of us to get anything right. She took all the materials that were actually interesting and offered any depth - strange since she made such a big deal out of making sure we were all "learning" during the initial research. This was not OK, so I told her which topics I'd take. Sam and Jose backed me up by making their own preferences known.

We spent time negotiating who took what, but it was much better than her assignments. This clearly irritated Anna, but with everyone disagreeing, there wasn't much she could do. She couldn't let go entirely, though, and when Jose claimed one that she wanted, she told him she'd "help" him with it because it was very complex - does she not see how insulting that is?

I spent about an hour and a half on reading, searching and getting writing my summaries this week.

- 4 Jose and Sam were a bit late to the meeting. Anna was visibly upset, but she didn't say anything about it. Sam explained that he forgot to finish two of the five parts he was working on, and I thought she was going to explode. I don't see why this was such a big deal since we've still got time before even the first assignment. After we took a look at everyone's work, she couldn't contain herself any longer and asked why no one had done their work. She compared what we brought to what she brought. She's got what looks like completed portions to be added directly into the paper.

I told her to give it a rest - we still have time and no one was slacking off, but she got upset and asked how I would be able to put anything together using materials as thin as this. That's when Sam spoke up. He made a joke about how poorly he'd done with his part - his wasn't just thin, it was nonexistent. It wasn't actually funny, but everyone laughed, and he volunteered to assemble next week's assignment since he still has pieces to do. He also suggested that we take a look at what we've got and whether the outline we put together still fits. It was really either that or fight for an hour, so everyone is all for it.

I had some new ideas about how to sequence the paper Anna particularly liked one idea, but Sam pointed out that he wouldn't have time to do it all, and she started getting upset again. I offered to make the changes if Sam could get the rest of it done by the middle of the week. Sam gladly accepted this and we decided to coordinate later.

Naturally, before we left, Anna had to remind everyone that we need to keep working on our summaries because we've got the draft due in another four weeks.

After the meeting, I asked Sam to let me know when he was done with his part. When he was done, I suggested that we meet at the library the next evening. We got to talking about the project and I pointed out that I knew our topic was his idea first. I think he really appreciated that. We worked together on the revisions and it went smoothly, with me doing most of the writing. There was only one time we disagreed and that was just because I didn't think we could make Anna go along with Sam's idea. It's just not worth fighting with her. We finished the writing quicker than I expected - maybe an hour or so.

The day after I met with Sam, I cleaned everything up and put it all together for submission. All told, I think I spent about two hours on this outside of our weekly meeting.

- 5 I turned in our assignment in class and the instructor allowed us some group time at the end of class, so we all reviewed what Sam and I put together. Anna was particularly pleased with what we'd done, so the meeting went well.

Sam and I arrived a couple of minutes early for our meeting and we were joking a bit, but then Anna showed up and we got down to business. Sam was really getting excited about the paper, and he suggested that we further build out our summaries into the paper. Anna looked at him like he was dumb and told him (like it was obvious) that each of the summaries would fit in multiple places in our outline. He looked confused - like he wasn't quite sure what he was trying to say, but that's when Jose showed up and joked that maybe we should take the week off! He argued that we had to wait for the instructor's feedback, anyway. I thought it was funny, so I encouraged him, but then I realized he didn't think it was a joke. Of course we would have to keep working if we wanted to get everything done in time.

Anna took both of us seriously and got upset. She spent the next ten minutes explaining that the instructor probably would barely look at our papers, much less provide meaningful feedback. She pointed out that it'd probably be weeks before we got anything back at all and by that point we'd have no time left to get our draft together. She also made the point that if we kept going, we might be in a good place to break later during midterms. Jose was disappointed and said he'd be late next week either way because of practice.

We split the paper into quarters, and we each took a section to write up for next week.

My section was supported by some of my own summaries, as well as a lot of Anna's work and I have to admit that Anna's a good writer; she made it easy for me to put things together with her notes and pointers. It's like she's known exactly how this paper would look from the very beginning.

- 6 Again, Sam and I arrived at around the same time for the meeting this week. Anna arrived a few minutes later, and we reviewed our work. We spent a long time talking about some of my observations and what they could mean in other parts of the paper. Anna was distracted from Sam's poor writing skills by his impressive artistry. This pushed us to spend some time looking through Anna's and my pieces to try to come up with good visuals there, too. I volunteered to add a chart of some of my data, but Anna said no, because she wanted Sam to do it. I haven't really done that kind of work, and I wanted to give it a shot, but Anna still wouldn't let me. She wants me to do the proofreading because she thinks I'm really good at it (even if it is boring), and she doesn't want me to be overworked. It's not worth fighting about it. There'll be other projects...

When Jose arrived, he reminded us that his team is preparing for their upcoming game and he'll be late for the next couple of weeks. He was very upset when we looked at Anna's work because I guess she changed a lot of what he wrote. I didn't see what he gave her, so I'm not sure, but he said that he feels like Anna's ignoring or ripping out the work of everyone who doesn't do what she wants (true). He pointed out that she's always telling everyone what to do (he's right). Anna said she was just trying to make sure the paper feels unified in its vision.

They probably would have argued for the rest of the meeting, but I figure that since Anna's part of our team, we're going to have to work with her. She's got good ideas, so I pointed out that even though the paper is much different from what I'd thought it would be, it was turning out well. Jose asked us to at least consider including the perspective that Anna ripped out. Anna said no, because we would end up with just another boring paper that anyone could write; we'd have to spend a huge amount of time rewriting the paper that way. She asked if Jose wanted to do a complete rewrite for next week. At this, Jose gave up and we decided to keep the paper as she'd written it. We didn't look at Jose's work because he would have to make some major changes to it.

I spent about half an hour cleaning up my part a little more, but that was about all for this week.

- 7 Jose was late again when he arrived this week, but this time he was visibly limping. I'm not sure if Anna thought he was faking it, but she rudely told him to "please try to be on time in the future." Naturally, this set Jose off, and he shot back that it didn't matter since she was basically writing the whole thing herself. Seeing that this was going nowhere, I tried to calm everyone down. I reminded everyone that we're all equals working on this project together, and I even made Jose and Anna both say so out loud. Of course, that won't make any difference to Anna, but it made Jose feel better.

After reviewing each other's work, we decided to swap papers to proofread them. I took Jose's, but I also wanted to get started on assembling the paper, so I also volunteered to do that. Anna said no at first, because she thought I couldn't handle matching up everyone's proofreads with the assembled paper, but I promised that I'd reassemble it next week if I couldn't match things up. I felt uncomfortable that we still hadn't seen all the pieces together.

As we were getting ready to leave, Jose asked if anyone would mind changing our meeting time for next week - he had a study session to prepare for one of his midterms. I also have midterms to study for and Sam suggested that we cancel the meeting, since the paper is in pretty good shape. Naturally, Anna said no. She said we should still meet, but that we could do it briefly, immediately after class to share our changes.

I proofread everyone's papers as I was putting them together into the final paper this week. It took me about two hours, and I had to move a bunch of things around, but it made me feel better to know that we were almost ready to turn this thing in.

- 8 During this week's class some of the discussion touched on the topic of our paper; both Jose and Sam spoke up during the discussion. There was some good debate about the competing points of view. Sam's comments made sense to me because I know him at this point, but he doesn't explain himself well, and I'm not sure it made sense to anyone else.

After class, we met briefly as we decided last week. Everyone was excited to see the full paper. Jose and Anna pointed out a problem with one of the images and asked Sam to fix it, but he said he couldn't. Anna was disappointed, but Sam said he'd already tried to fix it and it always came out worse instead of better. Finally he said he'd give it another try, and that was enough to let us move on.

Sam asked about our in-class discussion and how we wanted to address that in the paper. It was clear that there were multiple points of view, and we should at least acknowledge them. Anna listened for a bit but soon got tired of it and told Jose that would make the paper boring. Compared with what we've got, she's kind of right.

Sam pointed out that we need to at least acknowledge the in-class conversation, and Jose jumped on this, volunteering to add a section about it. Anna agreed, but didn't want Jose to write it because I guess she doesn't trust him to make it look good enough to turn in next week. I said I'd review it when Jose got it to me and then integrate it. Anna was OK with that. I asked Jose to get it to me by mid-week. Anna caught me on the way out and told me to make sure to keep the new section brief.

Jose got the new section to me late in the week, but there was still plenty of time for me to put everything together for class. I probably spent about an hour on it.

- 9 In addition to the copy to be turned in, I brought copies of our draft for each of us to review. I couldn't stay after class to discuss it, though, and I guess no one met, anyway. This was going to be a busy week for me with an unexpected project dropped on me in another class.

Later in the week, Jose thanked me during the week for putting the paper together, and it really made my day. I told him that I'd be a little late to the meeting because of this other project I had to work on; he said he'd let the others know. When I arrived, I learned that Jose told Sam but "forgot" to tell Anna. She sat in the meeting alone with no idea what was going on. That was a pretty awful thing to do and, although she tried to hide it, Anna was definitely hurt. I felt terrible.

Anna had a long list of changes to the paper and some of them were pretty big, but no one said anything - I know I felt guilty. I imagine everyone else was, too. She asked us to take another look at the whole paper, and read it straight through for next week to make sure we haven't missed anything.

Our next task was to prepare for the presentation. Anna drafted a PowerPoint for us to use and then assigned slides to each of us. At one point, she asked if anyone was upset with their piece and no one was, so she kept going. Then she told us we needed to write up our talking points for each of our slides and to practice a few times for next week.

I had a lot to cover in my portion, so it took me awhile to put together a set of notes. I spent a lot of time practicing it and reworking it to try to make sure it fit the time allowed and to make sure it felt like it flowed properly. I don't like public speaking, but if I'm prepared then I'll be OK. Two hours later, I felt OK.

- 10 Wow! I don't know what Jose and Sam were thinking - it looks like they just threw together some notes and didn't bother trying with anything else. They spoke way too long and were off-topic throughout. Anna had obviously put more thought into it, and I could tell that she'd actually practiced, but she also needed a lot of work. I like Jose, but he seemed to be almost happy to be able to criticize her for a change, and that was disturbing. She didn't like that at all and asked if he was trying to make the presentation better or make her feel bad. He shut up after that.

After three practice runs together, everyone took home a list of things to fix their presentations. I need to look out at the audience and speak louder - that sounds easy, but it's just not. More practice for me.

I spent about half an hour practicing this week and asked one of my friends to listen to it. She liked it and gave me a few recommendations, too, but mostly it was just good to practice in front of real people.

- 11 In class, the instructor returned the drafts to the groups and we met briefly during class to review it. The instructor left only six comments in our paper, and most of them were pretty small, but one asked us to further develop a section.

Our meeting started with another fight between Anna and Jose. Jose interpreted one of the comments to mean that he should write more in the section about alternative perspectives, and Anna, predictably, disagreed. Anna talked down to him a lot, and that just kept making him angrier, but it was clear that he wasn't getting anywhere. It would mean rewriting the whole paper and no one wanted that. Ultimately, Jose gave up and Anna said she'd make the changes the instructor requested this week.

The presentations were better this week, but we still need more practice and a bunch of rework. Jose changed his part in response to what he thought the instructor was saying, but he said he'd change it to make sure it was still in line with what everyone else wrote. We do have the note in the paper, so I guess he's got that covered.

Anna had improved upon hers significantly since last week. I don't know how she did it, but it sounded perfect. Most importantly, this time Sam focused on our content rather than the diagrams. Finally, we talked about how we should dress for the presentation. I thought it would be a great idea to have costumes in keeping with our topic and both Jose and Sam liked that, but Anna said it would make us look like children. She said we had to wear business attire so we would look professional. When we ended the meeting, Anna reminded everyone that our presentation is in just two weeks.

I had a few small changes to make and did a few practice runs this week, but probably not more than half an hour.

- 12 I had to be late this week because of another meeting. When I arrived, Anna was finishing up looking at the changes. I asked that we take another look, but Anna told me that it would be better for me to look at it after the meeting, instead - for the sake of time. Although it didn't seem like anyone made very many changes, the presentation felt much better this week. Whatever it was, after two practice runs, we sounded smooth. It's still running too long, but the group agreed that everyone will probably speak faster in class, and the instructor probably won't be a stickler on time.

When everything looked and sounded good, Anna actually suggested we end early this week, and everyone agreed. However, before we left, Anna reminded everyone to wear formal business clothes to the presentation next week.

I practiced once this week with a friend, but mostly I focused on my other coursework.

- 13 We were the only group dressed professionally, and I think that probably earned us some points. I think that all my practice paid off; the instructor only had to ask me to speak up once. Jose stumbled on his first few sentences, but then he relaxed and I think it came out well overall. The biggest surprise, though was Sam; he added an analogy at the end that not only tied everything together, but it also made everyone laugh. It was unexpected and risky, but it worked out well. There weren't a lot of questions for us and naturally, Anna stepped forward to answer them.

I think we can expect positive feedback and good grades.

Since the paper is mostly finished, we all decided to cancel this week's meeting and, instead, each give the paper one last review for next week. Naturally, Anna told us to read through the paper one more time to make sure we had everything.

I have to admit that I am sick of that paper, and I didn't look at it at all. It's good enough to turn in as it is, and I won't make it any better at this point.

- 14 At the final meeting, we compared notes and found that we had no major changes to make. I took all four versions to make what few changes there were and submit it at the end of the week. For some reason, Anna didn't trust me, though, and asked me to send it to her first. What am I going to do - ruin it? Of course she still wanted me to put it together, she just wanted to make sure she's the one to submit it.

I am so glad this project is over and I hope I never wind up on a team with her again. Of course I said I'd do it, but I had to keep reminding myself that it was almost over.

Making the changes went pretty quickly and I got her the paper the next day. I assume the paper went in on time as planned, and I imagine we'll get a good grade.

Week Sam

- 1 In group time the first week, we began by setting up weekly team meetings. I think we got lucky because Anna is already a sophomore while the rest of us are freshmen. It seems like she knows what she's doing.

The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time. Kim was quiet, but Jose, Anna and I all volunteered a few topics. Two of mine were meant to be jokes, but no one seemed to understand them. The third was serious, but no one seemed to understand it, either, which is frustrating. Everyone loved it when Anna suggested the same thing a little later. She had a bunch of good ideas and I don't think she was stealing my idea or anything, I just said it wrong. Anyway, everyone thinks Anna is brilliant, so we focused on her suggestions.

Before the meeting ended, we narrowed it down to five ideas. Anna told us we should each look for resources on one topic and then report back next week. She spoke up for the topic she explained more clearly than me, and I quickly spoke up for another one I liked. After a few moments, Jose took another. Kim said she'd take the last two, but I guess Anna's concerned, so she offered to take one herself. However, Kim insisted that she could handle it, and eventually Anna split it with her.

I spent about 30 minutes researching my topic this week and I think we're off to a good start, so I feel pretty good.

- 2 We began the meeting by going over the materials we collected over the last week. Anna was clearly disappointed, but I didn't understand what the problem was. This was only the second week and we were just trying to narrow down the topic.

Anna laughed and started asking questions about the materials I'd found. They were very in-depth questions, and it's not as though we needed to know all of that now. However, she argued that we would need to know the answers to evaluate the topics effectively, and she could answer those questions for hers. I didn't agree with her, but I didn't want to fight about it, so I said I did.

Jose suggested that, in the interest of time, maybe we just go with the topic she worked on, but Anna insisted told us that we had to redo our work. She pointed out that we all need to be able to do the research - and maybe one of the other topics would be better for our group. She's going to be a pain in the neck. We all agreed with her and said we'd redo our work.

The next night, I spent about another hour and a half on finding and skimming through new materials. Most of my materials were still fine, but I read more of them and now I can defend them. I found some extras, as well. I'm really liking this topic and I'm becoming convinced that this is the one to go with. There's lots of material on it and it's just plain interesting!

- 3 During this week's meeting, we sorted through the materials we've got to evaluate to decide on a topic and we have much better materials this week. I really like the topic I researched, but Anna is pushing for the one she took initially. I tried to explain how we could touch on so many different areas with mine, but that's exactly why Anna doesn't like it - she thinks that we wouldn't be able to focus ourselves. Kim seemed to understand what I'm saying and agreed with me, but Jose supported Anna. We went back and forth for most of the meeting and really it was a pretty good discussion, but in the end, Anna won Kim over.

After the topic was settled, there wasn't much time left, but Anna jumped right into drafting an outline, and she wouldn't let anyone else help. I suggested something I've used before to try to make the paper easier to read, but Anna didn't like it and wanted to go with a more conventional approach. She figured that we just didn't know how to write a paper, so she spent about ten minutes explaining to us what an outline is and why we use it. No one made any comments on the outline after that.

Jose suggested that we each take a few of our sources, search for more on our own and then write up summaries for next week so we're ready for the first assignment. Anna agreed and started assigning them out. However, she did it like she'd decided that she was the only one with a brain and she didn't trust any of the rest of us to get anything right, so she took all the materials that were actually interesting and offered any depth - strange, since she made such a big deal out of making sure we were all "learning" during the initial research. I wasn't the only one upset - Kim spoke up first to request a specific topic and then Jose and I joined in. This clearly irritated Anna, but eventually she gave in and we each claimed the ones we most wanted. She still couldn't let go, though, and when Jose claimed one that she wanted, she told him she'd "help" him with it because it was very complex. He wasn't happy about that.

I spent about an hour reading, searching and getting started on the summaries one night this week, but figured I'd do the rest next week.

- 4 I made a mistake. I forgot to finish my summaries until about half an hour before our meeting. Not only was I late to the meeting as a result, but I didn't have time to finish, either. Jose was just arriving when I walked in and Anna got upset with us both for being late, but then she was even more upset when we shared our work. Anna wasn't sure who to be more upset with: me or Jose. Kim's work was OK, but Jose's were a bit on the brief side. However, after she got through my first three summaries, there was no hiding the fact that I'd forgot two of them. I apologized and explained that I'd had a lot to do for my other classes. Both Kim and Jose understood, but Anna just couldn't let it go.

Then she showed us her pieces which went way beyond "summary" and looked like completed portions to be added directly into the paper. She asked why we didn't all include pointers to where the summaries should ultimately fit in the paper like she did. Kim argued with her on this. She asked why Anna's written so much already when we're so early in the project. After all, we only have the preliminary structure done and this is only the fourth week of class. Anna got upset and asked how anyone would be able to put anything together using materials as thin as this.

That's when I spoke up. I tried to lighten the mood by pointing out that mine wasn't just thin, it was nonexistent, and everyone laughed. It wasn't that funny, really, but I think we needed it. I also volunteered to assemble next week's assignment, since I still had pieces to do. Finally, I tried to move us on by suggesting that we take a look at what we'd got and whether or not the outline we put together still fits. The truth is I was just trying to get Anna to move beyond the poor quality of everyone's work.

The discussion was OK, and Kim offered some really good ideas about how to sequence things. I thought they were good ideas, but we really didn't have time to put them together. There was just no way I could get all of that done in the next week. However, Anna really liked the idea and started getting upset with me for not having time. I know I screwed up this week, but does she want me to mess up again next week? Fortunately, Kim stepped up and offered to make the changes if I could get the rest of it done by the middle of the week. I accepted this and we decided to figure out the details after the meeting.

Naturally, before we left, Anna had to remind everyone that we need to keep working on our summaries because we've got the draft due in another four weeks.

After the meeting, Kim asked me to let her know when I was done with my part and when I did, she suggested that we meet at the library the next evening. We got to talking about the project and other classes. Although she's quiet, she seems to notice everything. She even pointed out that she liked how *my topic idea* was turning out - she noticed that I was really the first one to suggest our topic!

Anyway, we both had time, so we sat down to work together on the revisions and it was so easy to work with her. At one point, though, she blocked what I thought was a good idea, asking if I thought I could convince Anna to go along with it. It's annoying, but she was right. We finished the writing much quicker than I'd expected - maybe an hour or so.

All told, I think I spent about two and a half hours on this outside of our weekly meeting.

- 5 Kim had our assignment ready and turned it in during class. The instructor allowed some time at the end of class this week, so we all reviewed what she and I put together. Anna was pleased with what we'd done, so the meeting went pretty smoothly.

Kim and I arrived a couple of minutes early for our meeting and we were joking, but then Anna showed up and we got down to business. After working with Kim last week, I really see how the paper is taking shape. I suggested that maybe we further build out our summaries into the paper. Anna just looked at me like I was dumb and said that we had to break it up into quarters because each of the summaries would be represented in multiple places in our outline. I thought we weren't quite ready to start on the actual paper yet, but I couldn't explain that and she'd already decided, anyway.

That's when Jose showed up and said we should take the week off! He argued that we had to wait for the instructor's feedback. Kim and I jokingly encouraged him, but I don't think he thought it was a joke. I'm pretty sure Anna didn't, either, because she got very upset and spent the next ten minutes explaining that the instructor probably would barely look at our papers, much less provide meaningful feedback. She pointed out that it'd probably be weeks before we got anything back and by that point we'd have no time left to get our draft together. She kept on about how we couldn't stop now because we'd want to take a break later during midterms. She was right about all of it, of course, but Jose was really disappointed. He said he'd be late next week either way because of practice.

We split the paper up into quarters and each took a section to write up for next week.

My section was supported by some of my own summaries, as well as a lot of Anna's work and some of Kim's. I have to admit that Anna's a good writer. She really made it easy for me to put things together with her notes and pointers. She provided a nearly-complete set of instructions for me to follow in building out the paper. It's like she's known exactly how this paper would look from the very beginning.

I had some ideas for diagrams that would help to make some things clearer, so I went ahead and drafted them. I spent a lot of time on this because I sort of get absorbed in trying to make my art perfect. As a result, I probably spent about two and a half hours on everything together.

- 6 Kim and I arrived at around the same time for the meeting this week. Anna got there a few minutes later and we reviewed our work. Kim had done well with her piece and we spent a long time talking about some of her observations and what they could mean in other parts of the paper. My writing is nowhere near as good, but Anna was distracted by the images I included. I have to admit that I'm pretty proud of them. We spent some time looking through Anna's and Kim's pieces, trying to come up with visuals there, too. Kim said that she'd add a chart using some of her data, but Anna told me to do it.

At first I was happy because I had fun with them, but Kim responded that she hadn't done a lot of that sort of thing before and wanted to try it even if she then handed it to me to clean up. I thought it was a good idea, but Anna seemed not to hear it. She said I should do it because I'm good at it - but it didn't feel like a compliment. It feels like that's all I'm good for. I thought it should all be shared around, anyway? How else is everyone going to learn?

Then Jose arrived and he reminded us that his team was preparing for their upcoming game and he'd be late for the next couple of weeks as a result. I think he's here on a sports scholarship. Anyway, he was very upset when we looked at Anna's changes to his work. I didn't see what he gave her, so I'm not sure, but he said she ripped out or rewrote most of it and I believe it. She's always telling everyone what to do (he's right) and she clearly doesn't think much of him or his work. Anna said she was just trying to make sure the paper looks and feels consistent.

This time, Jose wasn't backing down, though, and they probably would have argued for the rest of the meeting, but Kim spoke up. She commented that even though the paper is much different from what she thought it would be, it was turning out well. Jose asked us to at least consider including the perspective that Anna ripped out, but Anna tore the idea apart as too conventional and obvious. She said that we would wind up with just another boring paper that anyone could write and that we'd have to spend a huge amount of time rewriting the paper that way - she asked if Jose wanted to do a complete rewrite for next week. At this, Jose gave up and we decided to keep the paper as she'd written it. We didn't bother looking at Jose's work for this week because he would have to make some major changes to it, anyway.

I enjoyed working on images again this week and they all look even better now. The team offered good suggestions, but also I had some more ideas. I really like doing this kind of work. With that and the substantial cleanup I needed to do to the written portion, I probably spent almost another hour and a half this week.

- 7 Jose was a little late again when he arrived this week, but this time he was visibly limping. I'm not sure if Anna thought he was faking it or what, but she asked him to "please try to be on time in the future" in an overly polite tone. This set Jose off and he sniped back that it didn't matter since she was obviously writing the whole thing herself however she wanted. Kim spoke up to calm them both down. She even made everyone, including Anna, confirm (out loud) that we are all equals, working on this project together. Of course, Anna had to remind us that she had more experience than anyone else, but Kim pushed us on anyway.

Anna was clearly disappointed with my work this week, but it wasn't too bad and the images were good. We decided to swap papers with each other to proofread them; and she took mine. Everyone was OK with this, but Kim wanted to get started on assembling the paper and volunteered to do that, as well. At first, Anna said no because it would be tough to match the individual pieces with the assembled document so that we could make the changes, but Kim said she'd take care of it.

As we were getting ready to go, Jose asked if anyone would mind changing our meeting time for next week - he has a study session to prepare for one of his midterms. I thought that was a great idea I because also have midterms coming - I suggested that we cancel it, since the paper is in pretty good shape. Naturally, Anna said no. She said we should still meet, but that we can do it briefly, immediately after class to share our changes.

I took Anna's piece and so there wasn't much to clean up (she'd probably change it all back, even if I had). I was able to read through it quickly.

- 8 During this week's class, some of the discussion touched on the topic of our paper and it felt good to be so well prepared. There was some good debate about the competing points of view and Jose spoke up a lot. I made a few comments, but, as usual, they didn't quite come out right. I could see that no one seemed to quite understand what I was saying. I'm not good at that sort of thing.

After class, we met briefly as we decided last week. Kim did a great job on the document again; she made a lot of changes on my portion. Jose pointed out a problem in with part of my piece, but I didn't get it until Anna got impatient and told me I'd forgot one of the diagrams. I had to explain that I'd actually spent about half an hour on it and couldn't make it work. I'm not actually trained as an illustrator or an artist or anything. They were all disappointed, but naturally, Anna just told me to try harder. I said I'd try again, but honestly, I don't what more to do.

I asked about our in-class discussion and how we wanted to address that in the paper. After all, it was clear that there were multiple points of view and we should at least acknowledge them. Anna said those approaches were boring and that she wasn't going to throw away a good paper - pointing out that our existing approach showed that we are both creative and thoughtful.

I agreed with Anna in general, but I pointed out that we need to at least acknowledge the in-class conversation. Anna gave in a little bit and allowed a brief section, but didn't want Jose to write it because she was nervous that his work wasn't very good and we wouldn't have time to clean it up by the time the draft is due next week. Jose was offended by this, but Kim told Anna she'd review it if Jose could get it to her quickly and Anna was OK with that. So Kim asked him to get it to her by mid-week. Jose accepted this.

I spent another half an hour on trying to rework the diagram, but I'm sure it's not what Anna wants.

- 9 Kim had our paper ready to be submitted when she arrived in class, and she also brought a copy for each of us to review. I had to leave right after class, but I took a look that evening and it looked good to me.

Later in the week, Jose and I got to talking after a class we share, and he told me that this week's meeting would start about ten minutes late. Unfortunately, it seems that no one mentioned this to Anna. She was getting ready to leave when we arrived. She's usually very serious, but this week she seemed to be even more uptight and stressed - she was probably really angry.

Anna had a long list of changes to the paper and some of them were pretty big, but no one said anything - I know I felt guilty and I imagine everyone else did, too. She told us all to take another look at the whole paper and read it straight through for next week to make sure we haven't missed anything and no one argued.

Our next task was to begin preparing for the presentation. Anna drafted a PowerPoint for us to use and then assigned slides to each of us. At one point, she asked if anyone was upset with their piece and I think everyone was afraid to make her mad, so she kept going. Then she told us we needed to write up our talking points for each of our slides and to practice a few times in front of a mirror for next week - like we're all children who have never presented anything before.

I think the images do a pretty good job of communicating the main ideas, so I used some of them as the basis for my slides. Since am pretty comfortable with my topic, I didn't bother with any notes.

- 10 Wow! Maybe I should have practiced a bit? While everyone liked my use of images, they basically said that I focused on them and didn't explain the topics well. No one else did a great job, either - including Anna. She had a bunch of things to fix and Jose seemed to be almost happy to be able to criticize her for a change. She didn't like that at all and asked if he was trying to make the presentation better or make her feel bad. He shut up after that.

Even after three practice runs together, everyone took home a list of things to work on to fix their presentations. Kim's was probably the best of all, but she spoke very quietly to her notes in her own hands, rather than to the audience.

I actually spent an hour and a half reworking my part - and then about half an hour more practicing it (in front of a mirror).

- 11 In class, the instructor returned the drafts to the groups and our team met briefly during class to review it. The instructor left only six comments in our paper, and most of them were pretty small, but one complimented my images. The only other one that seemed significant asked us to further develop a section.

Our meeting opened with another fight between Anna and Jose. Jose interpreted one of the comments to mean that he should write more in the section about alternative perspectives, and Anna disagreed. Anna talked down to him a lot and told him why he couldn't be right, and that just kept making him angrier, but it was clear that he couldn't win. I didn't want him to win either, because it would mean rewriting the whole paper. Jose finally gave up, and Anna said she'd make the changes the instructor requested this week.

The presentations were better this week, but we still need more practice and rework. Anna had improved upon her presentation significantly since last week. I don't know how she did it, but it sounded perfect.

We also talked about how we should dress for the presentation. Kim had a cool costume idea that was in line with our topic that Jose and I both liked, but Anna said it was unprofessional. She said we had to wear business attire so we would look professional. When we ended the meeting, Anna reminded everyone that our presentation is in just two weeks.

I had a few small changes to make and did a few practice runs this week, but probably not more than 45 minutes.

- 12 We had to start without Kim this week because she left a message with Jose that she'd be late due to a meeting for another class. We spent some time reviewing Anna's changes to the paper, and then she asked me about an incorrect reference that the instructor found. I've got to be honest, I am amazed that the instructor noticed it. I explained that it was just a placeholder I threw in while he was writing.

Kim arrived just as Anna finished looking at the changes. Kim asked us to take another look, but Anna told her to look at it after the meeting, instead. Although it didn't seem like anyone made many changes, the presentation felt much better this week. After two practice runs, we sounded smooth. While it's still running too long, we agreed that everyone will probably speak faster in class and the instructor probably won't be a stickler on time.

We decided we could finish early this week, but before we ended, Anna reminded everyone to wear formal business clothes to the presentation next week.

I practiced once this week with a friend, but mostly I focused on my other coursework.

- 13 We were the only group where everyone looked professional, and I think that probably earned us some points. Everyone spoke loudly and clearly enough that the instructor only had to ask Kim to speak up once. Jose stumbled on his first few sentences, but then he relaxed and I think it came out well, overall. I went last and I added an analogy at the end that I think tied things together nicely, and it made everyone laugh. There weren't a lot of questions for us and naturally, Anna stepped forward to answer them.

I think we can expect positive feedback and good grades.

Since the paper is mostly finished, we all decided to cancel this week's meeting and instead each give the paper one last review for next week. Anna told us to read through the paper one more time to make sure we had everything, but we've all got finals to prepare for.

- 14 At the final meeting, we compared notes and found that we had no major changes to make. Kim took all four versions and said she'd make what few changes there were and submit it at the end of the week. Anna asked her to send it to her first, because I guess she doesn't completely trust her. Kim was annoyed by this, but said she'd do it.

As far as I know, the paper went in on time as planned and I imagine we'll get a good grade.

Appendix K: Social loafing narratives

Week **John**

- 1 In group time the first week, we began by setting up weekly team meetings. The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time.

Iain had some really good ideas - it seems he's done this sort of thing before. I only had a couple of ideas and none of them are as good as his, but I volunteered both of them anyway. When Marie spoke, I wasn't sure if she was serious or not. Her suggestions were usually funny - but I'm not sure they were meant to be. She definitely has a unique approach. Hannah mostly just listened throughout - maybe she's shy. We built on each other's suggestions (mostly Iain's).

Before the meeting ended, we narrowed it down to three ideas, and Marie recommended we each look for resources on one topic to report back next time and select a topic. This seemed like a pretty good approach, and we all agreed. Iain spoke first to claim one topic based upon a prior interest. I spoke up next for another topic because I'd heard of it before and had an idea of where to look. No one challenged me, so it's mine. After some consideration, Marie spoke next, and that left Hannah without a topic, so we decided she should search for additional materials on Iain's topic. She seems nice but hasn't said very much.

After the meeting, I did some quick searches and turned up some promising materials for the following week. I feel pretty good about being able to contribute next week.

- 2 Hannah started getting upset because she had found few materials and complained that it was too difficult. Before I had a chance to speak, Iain pointed out that he'd gotten more than enough to start with and even volunteered to explain to Hannah how he searched, so she would have a better idea for the future.

After reviewing the topics and materials everyone found, there was a lot of discussion around which topic to choose. Everyone had an opinion. Marie led the group in writing out lists of pros and cons, and ultimately the group held a vote and decided on the topic I researched. I was excited about that, because it seemed the most promising and most of the group agreed. However, it wasn't the one Iain was pushing for, and he seemed grumpy afterward.

The materials I found were just the beginning, so the group divided the topic into subtopics and we each took a few. Hannah and Iain planned to meet separately so Hannah could learn some of Iain's research strategies. We plan to have summaries of what we've found for next week so we are ready for the next assignment.

I spent about two hours working on my task for the group.

- 3 We began our meeting by sorting through the materials. Together, Iain and Hannah were able to collect some quality materials and the summaries they've written help Marie and I to understand their value quickly. Clearly they've put a lot of effort into the task. I felt bad when my turn came because, by comparison, I had to spend more time helping the team to understand what I found - I did write them all alone, though. I was pretty sure the group mostly understood, but I told them I'd rewrite the summaries to make them clearer, and they were visibly relieved. Oops.

Marie's summaries were somewhat better than mine, but I don't see how most of them relate. They are interesting and some are funny, but how do they fit in? Iain and Hannah seemed to be confused - it wasn't just me. None of us knew how to respond, but after some awkward moments, Iain laid out a few direct questions and I would swear I saw a light bulb go on over Marie's head. Somehow, the way he asked those questions, she didn't seem to get upset at all! We all decided that there's plenty of time and that we can wait to meet again next week to review the updated materials from Marie and I.

I spent about two hours rewriting my summaries and even getting some more materials. Maybe it wasn't the most productive time, but I really didn't want to be embarrassed again, and I kept losing my focus.

- 4 I spent another hour reviewing all the materials and proofreading my work prior to the meeting. Iain was late by about five minutes, but Hannah was not in class at all and had not arrived at our meeting by the time Iain did. No one had heard anything from her, and she was unreachable using any of the contact information she provided.

We went ahead and started without Hannah and began working through Marie's updated materials, and Iain and I became concerned. After a few more discussions that were reminiscent of last week, Iain pushed us to move on; I was happy to join that effort. Marie, though a little confused, went with it. Much less time was needed for my materials because I had improved them a great deal. Going into the fifth week, I said I'd put together what we've got for our first assignment. Iain also pushed for us to get started on an early draft, and we split up the tasks of synthesizing sections of the paper.

Iain caught me outside after the meeting broke up and expressed his concerns about Marie and Hannah. We discussed the possibility of talking to the instructor, but decided to wait for a bit longer since it was only the fourth week. Iain thought we could still use some of Marie's resources, and I volunteered to proofread (i.e. rewrite) her summaries, while Iain offered to search for additional content.

I had to spend two nights making sense of those summaries and drafting my portion of the paper.

- 5 I turned in our assignment during class and it felt good to know that we were on track. Our instructor gave us some of time in class to meet, and we discussed our progress, but none of us expected to have this time, so no one brought their materials to review. I was mostly finished with my portion already and it had gone pretty smoothly. Either everyone else was in the same position or they hadn't started working on theirs. Either way, it was a bit of a waste of time.

Hannah was back for the meeting this week and wearing a cast. She slipped on some ice the weekend before and landed in the hospital for almost a week. She did bring a first draft of the section that was assigned to her in her absence (I emailed meeting notes to the whole group last week).

Iain was noticeably less enthusiastic this week than he has been in the past, and seemed to be less patient with Marie. Also, his draft doesn't look like he put much thought into it. There are a number of spots that read "to be determined," and I didn't see any citations anywhere. Marie was clearly nervous when the group reviewed her work, but I was actually impressed with how much she seems to have improved. That must have shown on my face because she seemed to relax after she looked at me. Hannah and I both pointed out a number of rough spots, but I was no longer nervous that Marie was struggling. Hannah explained that her own work was incomplete, and it clearly was, but (given the circumstances) everyone was just impressed that she'd done anything. The hours I spent writing paid off, as mine was easily the most complete. Usually Iain has a lot to say, but this week he was really quiet.

Marie suggested we each hand off our portion to another team member for a more thorough review and I volunteered to take Iain's because I knew it would need work. He, in turn, claimed mine, but Hannah wanted to take more time to finish her own section. Marie, reminding us of Iain's early, insightful comments, asked that he look at her work. Marie took mine. Wow! They were all fighting to take my work!

I spent a lot of time reworking Iain's paper. The language was clear and readable, but the sections felt thin. In fact, I grew one section so much that it had to be split out into two. Also, there were only two citations listed and one of them was wrong. It's pretty bad and I'm sure he could have done better than this.

- 6 Iain was in class this week, but he emailed the team about an hour and a half before the meeting to say that there was a family emergency and that he would not be able to make the meeting. He sent over his progress on Marie's part of the paper - and it didn't look he'd done much more than make the few changes we discussed in class last week.

The meeting was fairly productive and I felt like I could see the paper starting to take shape. Marie took an odd approach to revising my section; I think she didn't really understand it. Hannah seemed to agree with me, and Marie quickly said she'd go ahead and change it back. The three of us spent awhile talking about how satisfied we were with the topic. Feeling like much of the paper was in good shape, Hannah took the pieces home to assemble them into a full draft to use moving forward.

Before the meeting ended, I asked about switching next week's meeting time so I could meet with another study group - I really need to prepare for a mid-term exam the following week. After some discussion, we couldn't agree on a new time, so we decided instead to meet only for half an hour. Marie sent an email to let Iain know of the change.

- 7 This week turned out to be very busy, so I'm glad we decided to cut the meeting time down. Hannah gave everyone a copy of the document she assembled. After about 15 minutes of what was scheduled to be a half-hour meeting, Iain had not arrived, so we all decided to walk through what Hannah put together.

Hannah clearly spent a lot of time putting everything together. The formatting was consistent and I didn't see anything missing. There's one empty section, but she explained that it's because she added it - being the only one who's read it all through, she felt it was necessary. I jokingly suggested that Iain should write it; Marie quickly countered that'd mean I'd end up writing it, anyway. Hannah interrupted our joking and said we were being mean. I think she felt bad because, in the beginning, Iain had helped her. She reminded us that he was going through a family emergency and maybe he was really shaken up by it. I felt a little badly and we all returned to reviewing the document.

Once we finished walking through the document, we agreed to make notes/corrections/suggestions on our own for next week. As we were all getting ready to leave, Iain came in the door of the meeting room. Hannah quickly asked him if he was doing OK and what was going on - it seemed like she was afraid Marie or I would have said something mean if she didn't speak first. He said his brother was going through something that he was helping him with. We gave him a copy of the paper, and quickly explained what we'd all be doing for next week.

I only spent about 30 minutes reviewing the document, because I had a lot of studying to do for mid-terms, but there is be more work needed before this project is ready.

- 8 Everyone was there by the time I arrived this week. My instructor let me take a little extra time on my mid-term, which helped me out, but made me a little late to the meeting.

Marie has a great eye for detail - she found spelling and formatting errors that everyone else missed. Hannah volunteered to take everyone else's copies and make all the changes for the draft we turn in next week in class. When I asked about the section that was still missing, Iain said he thought it was too late to get it into the draft. He figured it should be fine to include a note that it will be in the final version and he made it clear that he wasn't going to do it. I didn't think this was OK. Marie agreed, and volunteered to draft the section and get it to Hannah by the middle of the week. Honestly, I'm a little nervous about Marie writing it, but it was clear that Iain wasn't going to do it, and I really need a break from this project. Hannah figured she wouldn't have time to do both the editing and the writing, but agreed to add the new content if Marie could write it in time. All Iain offered Marie were some (pretty good) suggestions on how to approach the new content.

The next evening, Marie asked if I could come over to help get the sections done in time. She was stressed because some surprise assignments in other classes gave her less time than she'd expected. I said OK, and when

we met up, I found that it was much more complicated than it looked. Working together, we were able to write a decent draft so she could deliver it to Hannah the next day, but it took most of the night.

- 9 Hannah didn't provide copies to everyone before class, and that was nerve-wracking, but she did have one to turn in to the instructor. She turned it in and now we get to wait for feedback. Of course, we already know some of the work that needs done.

Working with Marie last week, we noticed some problems in the draft that will need correcting - particularly stuff that Iain supposedly worked on. It's like he didn't even touch it. Just before Iain left for another meeting, Marie suggested we could use some diagrams to illustrate some of our points. Iain watched us sketch for a bit before he left. We came up with some good ideas and Marie volunteered to draw them out. I offered to reread the entire document and the meeting ended a bit early because we were mostly done anyway.

I spent another two and a half hours reworking the document this week.

- 10 Marie and I both arrived early to this week's meeting, and started looking at the images she put together over the past week while we waited for Hannah and Iain to arrive. The images were a bit odd and I don't think some of them are appropriate. When Hannah arrived, she said that Iain had let her know he won tickets to the game tonight, and so he couldn't make it to our meeting - nothing new there.

Hannah said she really liked the images Marie put together. They reflect Marie's quirky personality, but Hannah pointed out that they also include the right details to get the point across. She described them as functional, eye-catching, and memorable. They are memorable, but I don't think that was the goal here. I wish Iain had showed up, because he always seems to have a good feel for the project's direction. I'm pretty sure he'd agree with me, but I felt outnumbered. I made a few requests to tame them down, but ultimately I accepted it, and we moved on.

I'd made a lot of changes to the document, and some of them were pretty big. I walked through them at a high level to make sure everyone agreed before starting to prepare for the presentation. We decided on a basic structure and, for the next meeting, we decided that we should each put together notes or a script for what we would say during our part so we can practice it next week. Hannah said she'd pass this on to Iain.

I've had a difficult time writing my script, so one afternoon I emailed Iain to see if we could meet and work on it together. However, when I didn't hear back from him, I met up with Hannah instead. After working together for an hour, we both made some good progress.

- 11 In class, the instructor returned the drafts to the groups and gave us time during class to review it. Unfortunately, while we know there were many problems with that version, the instructor left only five comments in our paper. One said, "This shows promise," two corrected grammar issues that we've already fixed, one requested that page numbers be added, and one suggested clarifying one of the sections Marie wrote initially, saying it was a novel approach and that it should be explained more clearly and thoroughly.

Everyone arrived on time to the group meeting. The discussion began with how little feedback we received, and whether this meant the paper was in great shape or that instructor simply didn't really read it. Either way, we had the feedback we'd been waiting for, and it was time to move forward.

Marie asked Iain to review her section again, and he answered that he had already done so once at her request. Marie responded in a snarky tone that she'd like him to "actually read it this time." This became an argument, with Marie accusing Iain of not participating in the group. Iain attacked back, saying that the low quality of her work made it very difficult to work with. That wasn't fair, and I started to defend Marie for at least working and trying hard, and showing up, when Hannah raised her voice and everyone quieted down. She reminded the group that the presentation was coming up soon and that we needed to practice. Iain said that, while he wouldn't have time to go through the entire paper, he would take a look at Marie's section again before next week.

The rest of the meeting was spent working through the presentation. Marie put together a PowerPoint and we did a practice run. Iain really seems to have put a lot of time into his part; he sounded very polished. He also had many suggestions for the rest of us, but, honestly, they were hard to hear after the argument we just had. By the end of the meeting, the presentation was still running too long. I have to make decisions on how to cut my part down, but with two weeks left, I feel pretty good about it.

I spent about an hour on revising and cutting content from my presentation during the week.

- 12 Everyone arrived on time for the meeting this week. Iain provided feedback on Marie's section and, reading through it, it became clear that making these changes would require more substantial changes throughout the paper. We could easily have just ignored them because what we have is not wrong, but making the changes would certainly improve the paper. However, so close to the end of this class, I'm not sure we have the time to do this - especially with everyone getting ready for final projects and exams. It would have been nice if he'd bothered to read the paper earlier, when it would have been easier to make these changes. Why didn't he even try to start making them?

Hannah said she thought she had time to make the changes this week, and volunteered to try if someone else would read through it next week. When no one else responded, I volunteered. She's been doing a good job and checking it over shouldn't be a huge amount of work, even with all my other classwork to prepare.

This week, the presentation was much better. After three practice runs, it sounded smooth. While it was still running a bit too long, we agreed that everyone will probably speak faster in class, and the instructor probably won't be so strict about timing.

This week, aside from practicing my part of the presentation, I mostly focused on my other classes and end-of-semester activities.

- 13 The presentation went very smoothly. Hannah seemed nervous, spoke too quickly, and faced the PowerPoint instead of the class, but she knew what she was talking about and that showed. The audience asked some good questions, which showed that they understood the presentation, but Iain seemed to want to score points by answering most of the questions. I started to answer one, but he cut me off and he talked right over me as he answered himself. Also, we should have discussed attire beforehand, because Iain wore a suit, while Hannah and Marie were both wearing dress skirts and blouses. I felt out of place in my usual jeans and a sweater.

At our meeting this week, everyone commented on my casual clothes and I apologized, but I just never thought about it. Aside from that, the group felt good about the work we've done, and we all agreed that we expected positive feedback and good grades. Hannah shared her updated version of the paper and I took it to review (as we had discussed last week).

As we were leaving, Marie asked me to send her a copy as soon as I finished reviewing Hannah's corrections, so she could take another look at it. I spent about an hour reading through the new version, but I only made a few changes and then sent it on to Marie.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. Iain volunteered to do a final read, print the document and send it to the instructor. Marie started to attack Iain for not helping the group - I think she felt like he was trying to steal credit for all our work at the end - just like he did with the presentation. I was too tired for that, though, and I just wanted the project to be over, so I tried to calm her down and Hannah joined me. I suggested that Marie submit the latest version she had at the deadline, and if Iain was able to get her his updates by that time, they'd go in; otherwise, she should use what she had - Marie would send it in. Iain was annoyed, but agreed.

After the deadline, Marie confirmed that Iain got his changes to her in time for her to submit them, and she sent a copy of the finished product to the entire group.

Week **Marie**

- 1 In group time the first week, we began by setting up weekly group meetings. The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time.

Iain had some really good ideas - it seems he's done this sort of thing before. John tried to be involved by suggesting a couple of ideas, but they were pretty mediocre. I like to look at things from a different perspective, so I suggested some things that were not exactly off-topic, but not entirely serious, either. However, they seemed to fall completely flat; not only didn't they spark conversation, but I didn't even get a chuckle. Throughout the meeting, I could tell that Hannah was listening, but maybe she's shy, because she didn't say much. Pretty quickly we built on Iain's suggestions.

Before the meeting ended, we narrowed it down to three ideas. I recommended that we each look for resources on one topic, report back next time and then select one; everyone else agreed. Iain claimed a topic based upon a prior interest, and John spoke up for another. I reluctantly volunteered for the last topic, leaving Hannah without one. She said she'd search for additional materials on Iain's topic.

I didn't find much on my topic, so I got creative in my interpretation it - hopefully it will at least be good for a laugh. I was uncomfortable with what I have, but I know I've tried.

- 2 Hannah was upset because she had found very few materials - complaining that there was nothing to find. Iain pointed out that he had more than enough to start with, and even volunteered to explain how he searched to Hannah after the meeting, so she would have a better idea for the future.

After reviewing the topics and the materials everyone found, there was a lot of discussion around which topic showed the greatest promise. I decided to organize what everyone was saying into lists of pros and cons to make it easier to understand. The topic I'd looked at was quickly removed, but both John's and Iain's looked good. Iain pushed really hard for his topic, but I just couldn't seem to get as excited about it. Eventually, we held a vote and decided on the topic John had researched. I was pretty happy with the decision, but Iain seemed grumpy afterward.

The materials John had found were just the beginning, so we divided up the major subtopics among us. Hannah and Iain planned to meet separately so she could learn some of his research strategies. We planned to return next week with summaries of what we've found to make it easier for the group to get moving quickly.

With John and Iain's work as a model, I spent about three and a half hours over this week working on my task for the group - I don't want to feel stupid again at the next meeting.

- 3 We began sorting through the materials at this week's meeting. Iain and Hannah were able to collect some quality materials, and the summaries they've written help me understand their value quickly. They've clearly put a lot of effort into the task. John's materials, on the other hand, were difficult to understand and required his help in interpreting what he meant. He seemed embarrassed and told us he'd rewrite the summaries to make them clearer. My summaries got some laughs, but the group seemed to be confused by them. Their questions make it clear that they didn't see the same value in them that I did - and their questions also made me see why. They were being polite, but I could still tell. Finally, Iain asked a few direct questions that helped me to understand everything a bit differently - he's really got good control on this whole project. Everyone agreed that there is plenty of time, and that we can wait until next week's meeting to review the new and updated materials from John and me.

I spent another two hours getting new materials and rewriting my summaries. Hopefully this was time well spent.

- 4 Iain was late to the meeting by about ten minutes, but Hannah was not in class at all, and didn't show up for the meeting, either. No one had heard anything from her, and no one could reach her.

We began the meeting by working through our updated materials, and Iain and John were still concerned. After a few more questions that were reminiscent of last week, Iain pushed to move on. I'd only got through about half of my materials, but they didn't seem all that pleased. I felt stupid because I guess I still don't get it, so I was happy to move on. John's materials, on the other hand, were really solid, and he volunteered to put together what we've already got so we can turn it in next week. Iain pointed out that we really needed to get a draft going. John echoed this and I agreed, so it was settled. We split up the tasks of synthesizing the sections before we ended the meeting to keep us moving forward.

I spent an entire evening drafting my portion of the paper, and then I spent most of another day reworking it.

- 5 John turned in our assignment during class, and our instructor gave us some of time in class to meet. We discussed our progress, but none of us expected to have this time, so no one brought their materials to review. I had already finished with my part, and I thought it was OK. Either everyone else was in the same position or they hadn't looked at it. We all left early.

Hannah was back this week and wearing a cast. She slipped on some ice the weekend before and it landed her in the hospital for a week. She did bring a first draft of the section that was assigned to her in her absence - John emailed meeting notes to the whole group.

Iain seemed like he didn't care this week, and he was a bit condescending to me, too. He brought a draft of his portion, but it doesn't look like he put much thought into it. There are a number of spots that read "to be determined," and I didn't see any citations or references. I was nervous when the group reviewed my work, but this time they actually seem satisfied with it - more than that, they seem impressed. I could read it on both John and Hannah's faces, and that was a relief. Iain seemed not to have paid much attention at all, so I got little reaction there. It wasn't perfect, but mostly now it was grammar or spelling, so it wasn't a big deal to me - it didn't leave me feeling stupid and confused. Hannah explained that her work was incomplete, and it clearly was, but (given the circumstances) even this much was great to have. John's writing was excellent. His piece was easy to read and made sense and he covered all the points he was supposed to - he must be putting a lot of time into this class. Throughout the meeting, Iain was really quiet.

When we were done, I suggested that everyone trade their portion to another group member for a review. John volunteered to take Iain's and Iain claimed John's - probably because it was already in such good shape. However, Hannah said she wanted to take more time to finish her section. I didn't feel it was fair for Iain to take the easy task, so I reminded the group of Iain's early, insightful comments and asked that he look at my work; I took John's, instead.

John's portion was in great shape, and it didn't take me more than an hour to read through it and fix the few mistakes that were there. Then I got an idea for presenting the information in a different way that could shed additional light on the topic. I spent an hour putting it together, but when I looked at the clock and saw how late it was, I switched to my other classwork, because I still have time to finish this later.

- 6 Iain was in class this week, but he emailed the group about an hour and a half before the meeting to say that there was a family emergency and that he would not be able to make the meeting. He included his work on my section - and it didn't look he'd gone any deeper than the few changes we discussed in class last week.

The meeting was pretty good, and I can see that the paper is definitely starting to take shape. Unfortunately, I noticed when I got to the meeting that I accidentally forgot to get back to my revisions of John's work. That's probably a good thing, because John and Hannah don't seem to understand what I was doing, anyway. Maybe it was too much of a stretch. I hope they don't think I don't understand what's going on. The three of us wound up spending awhile discussing how happy we were for choosing this topic - it's more interesting than any of us expected. Feeling like much of the paper was in good shape, Hannah took the pieces home to assemble them into a full draft to use moving forward.

Before the meeting ended, John asked about switching next week's meeting time so he could meet with another study group. With mid-terms coming, everyone agreed that we need extra time to prepare. However, we couldn't agree on a new time, so we decided instead to meet only for 30 minutes. I sent an email to let Iain know of the change.

- 7 This week turned out to be very busy, so I was thankful the group cut the meeting time down for this week. Hannah gave everyone a copy of the document she assembled. After about 15 minutes of what was scheduled to be a 30-minute meeting, Iain had not arrived. We went ahead without him and walked through what Hannah had put together.

Hannah clearly spent a lot of time putting everything together. The formatting was consistent, and I didn't see anything missing. There was one empty section that she added, because she felt it was necessary after having read the whole piece. John joked that Iain should write it, and I told him that would mean he'd end up writing it anyway. We both laughed, but Hannah got upset and said we were being unfair. She pointed out that Iain had helped her in the beginning. I don't really believe he had an emergency last week, but we both stopped talking about it, and turned back to reviewing the document.

Once we finished going through the document, we agreed to make notes/corrections/suggestions for next week. As we were getting ready to leave, Iain walked in. Hannah quickly asked him if he was OK and what was going on. He said his brother needed him. We made sure he had a copy and told him what we'd all be doing for next week.

I spent about two hours reviewing the document, because I wanted to make sure I was doing my part - I didn't want to be seen as another Iain. However, I had a lot of studying to do for mid-terms and there are still many weeks left in the project, so I figured that was enough.

- 8 Surprisingly, Iain was already there when I arrived. Everyone was impressed by my attention to detail - it seems I found more errors than anyone else. Hannah volunteered to take everyone else's copies and make all the changes for the draft that we are supposed to turn in next week in class. John pointed out the section that was still missing or incomplete. Iain said that it was too late to get it into the draft. He figured it should be fine to include a note that it will be in the final version. Clearly he wasn't going to fix it. I was uncomfortable with that, so I said I'd draft the section and get it to Hannah by the middle of the week. Hannah said that she'd incorporate the new content if she got it in time. Iain did offer some good suggestions on how to approach the new content, but that was all.

The next evening, I asked John for help getting the section done in time. I had less time than I'd thought because of a surprise assignment in one class and I already had to do major rework in another. Also, the sections were more complicated than they looked. He came over, and we were able to write a decent draft for me to give Hannah the next day - plenty of time. Working with John helped to ground me, I think. If it was just me doing this whole project, it would be much less conventional, I think, but, working in a group, I don't get to do that. John kept reminding me of this with his "let's just get it done" approach.

- 9 Hannah turned in our draft, and now we get to wait for feedback.

We do, however, already know of some work that needs done. Last week, John and I noticed some problems in the draft that will need correcting. Also, it seems Iain barely touched my work when I asked that he review it - and John pointed out a number of other areas that could be improved. Iain had to leave early for another meeting, but when I suggested using some diagrams to illustrate our points, he sat there for another five minutes of giving us nothing. We spent some time sketching ideas and then everyone was happy to let me clean them up - I'd just taken an illustration class. John offered to reread the entire document.

I spent an hour putting together the diagrams. I'm pretty proud of them - I got to use some of the skills I just learned, and I got to be creative and experiment for the first time on this project.

- 10 John and I started looking at the images I put together over the past week while we waited for Hannah and Iain to arrive. He seemed to be indifferent toward them, but when Hannah arrived, she said that Iain let her know he won tickets to the game tonight and that he wouldn't be coming to our meeting - why should he start showing up now?

On a positive note, she said she really liked the images I'd put together. John said they reflect my "quirky personality," and Hannah pointed out that they also included the right details to get the point across. She called them "functional, eye-catching, and memorable." After that, although I could tell John was still uncomfortable with them, he'd accepted it. He still said he wanted Iain's opinion, but just asked me to make a few small changes. That takes some of the fun out of the images, but I'm OK with that, as long as John and Hannah are.

John made a lot of changes to the document, and some of them were pretty extensive. However, he walked through them at a high level and everyone agreed, so we moved on to prepare for the presentation. For the next meeting, we each took a part and decided that we should put together notes or a script for what we would say so we could practice it next week. Hannah said she'd pass this on to Iain.

I've never minded public speaking, and I drafted a version of my script in about 30 minutes one evening. I also put together a PowerPoint, based on an outline of what everyone would cover.

- 11 In class, the instructor returned our draft and we met briefly to review it. Unfortunately, while we already knew there were lots of problems with that version, the instructor left only five comments in our paper. I guess they expected much of it to change since it was only a draft, after all. One said "this shows promise," two corrected grammar issues in sentences that were already gone, and one requested that page numbers be added. The only thing valuable for me was a request to clarify one of the sections I wrote. The instructor said it was a "novel approach" and that it should therefore be explained more clearly and thoroughly. It was nice to know I'd made an impression and that someone who counts got it!

During the weekly group meeting, we were all on time. The discussion began with how little feedback we got and whether this means the paper was in great shape or that instructor simply didn't really read the whole thing. I'm pretty sure it's the latter. Either way, I had the feedback we'd been waiting for and it was time to move forward.

I asked Iain to please review my section again and he responded that he already did that once. I told him it'd be nice if he would actually read it this time; maybe that wasn't the best approach, because it turned into a shouting match, but I'm upset that he didn't do his job in the first place, and I said that, too. I was trying to tell him that I really wanted his feedback, but he got upset and snapped back that it was difficult to read my work because it was so bad. I was too embarrassed to respond, but thankfully John jumped in and defended me (sort of), pointing out that at least I showed up and tried hard. Hannah raised her voice and everyone quieted down. She focused us back on the presentation coming in two weeks and the fact that we hadn't practiced for it yet. Iain reluctantly agreed to take a look at my section again for next week but made sure to tell us he was too busy to go through the whole thing.

The rest of the meeting was spent working through the presentation. The group used the PowerPoint I put together in a practice run. We made a few changes as we went, but I'd made a pretty good start. Iain really seems to have put a lot of time into his part and he sounded very polished. He also had lots of suggestions for the rest of us, but they were a bit hard to hear after the argument we just had. The presentation was running too long - particularly John's part. He doesn't seem very experienced at this sort of thing and said way too much, way too fast.

I spent about an hour revising my portion of the presentation and revising the slides during the week.

- 12 Everyone arrived on time for the meeting this week. Iain provided feedback on my section and, in reading through it, it was clear that making these changes would require larger changes throughout the paper. We could easily just ignore them because what we had was not wrong, but making the changes was the better way to go. It's just frustrating because he could have caught this much earlier if he'd bothered to read the paper, but now it's so close to the end of class.

Hannah said she thought she could make the changes this week and volunteered to try if someone else would promise to read through it next week. After a pause, John volunteered. I can't believe that Iain didn't make the changes when he saw that they were needed and then that he wouldn't bother to even read it. It's his fault we're in this mess.

This week the presentation was much better. After three practice runs, it sounded smooth. It's still running too long, but we agreed that everyone will probably speak faster in class and the instructor probably wouldn't be a stickler on time.

This week I focused on my other classes and end-of-semester activities.

- 13 The presentation went very smoothly. Hannah got nervous, spoke too quickly and faced the PowerPoint instead of the class, but she knew what she was talking about and it showed. The audience asked some good questions, which showed that they understood the presentation. Iain kept stepping forward to answer most of the questions without giving anyone else a chance - like he was trying to make it look like he'd done much more than he actually did. I think he even talked over John once. We should have discussed attire beforehand, because everyone but John dressed up. He looked out of place in his usual jeans and a sweater. I felt badly for him.

At our meeting, Iain commented on John's casual clothes. John apologized for it, but it felt cruel because he knew his part and was well prepared. He already seemed embarrassed about his choice of clothes. Aside from that, we felt good about the work we'd done and we expect positive feedback and good grades. Hannah shared her updated version of the paper and, after a quick review of the changes, we ended early with John taking the paper to review it as we discussed last week.

As we were leaving, I asked John to send me a copy as soon as he's finished so I could take one last crack at it before we turned it in. When he did, I spent about an hour and a half reading through the new version, but I didn't make any more changes.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. Iain volunteered to do a final read, print it and send it to the instructor. When I asked why he should bother now since he'd barely contributed anything to it during the semester, both John and Hannah stopped me- I guess they just wanted the project to be over. John suggested that I send it to him and submit the latest version at the deadline - if Iain could get his updates to me by that time, they'll go in, but otherwise we should go with what I've got. Iain was clearly annoyed, but he agreed.

Iain got the document to me in plenty of time to send it in and there were very few changes. After I submitted it, I sent a copy of the finished product to the entire team.

Week Hannah

- 1 In group time the first week, we began by setting up weekly team meetings. The project is fairly open-ended, so we brainstormed topic ideas for the rest of the time.

Iain had some really good ideas - it seems he's done this sort of thing before. John tried hard to be involved, but only suggested a couple of ideas and they were pretty mediocre. When Marie spoke, I sometimes wasn't sure if she was serious or not. Her suggestions were often funny, but I was too nervous to laugh - especially since no one else did. She definitely has a unique approach. Mostly, I just took it all in. Soon, we were building on each other's suggestions (mostly Iain's).

Before the meeting ended, we narrowed it down to three ideas. Marie recommended we each look for resources on one topic, report back next time and then select a topic. This seemed like a good plan; Iain spoke first to claim a topic based upon a prior interest and John spoke up for another. After a moment, Marie took the last topic, but she didn't sound thrilled about it - I think it sounds like a tough one. I was left without a topic, so I volunteered to search for additional materials on Iain's topic because it sounded the most promising.

After spending half an hour searching, I wasn't able to find much of anything. It was frustrating because Iain seemed so excited about it - I guess he's going to be disappointed.

- 2 When I arrived, I felt uncomfortable because everyone had long lists of what they found and I had so little to offer. I asked how everyone found so much - especially Iain. He found so much more than I did on the same topic! He said that he'd got more than enough to start with and even offered to work with me after the meeting to help me.

After reviewing the topics and the materials everyone found, there was some debate regarding which topic to focus on. Marie decided to start organizing things into lists of pros and cons to make it easier to understand; when she'd got some lists going, John's topic looked like the clear winner. We held a vote and decided on John's topic. This seemed like a good choice, but I could tell Iain was hoping that his would be selected.

The materials John found were just the tip of the iceberg, so we divided up the major subtopics to research with summaries for next week. This way we'll be ready for the first assignment and be able to start moving quickly on getting this paper finished.

I met with Iain two days later and he was still bummed about the topic the group selected, but he's nice and we got along well. He also seems to have much more experience than the rest of us do because, although he started with the same searches I did, he dug into the materials further to find related content. It took about two and a half hours, but we found some solid references. I went through them and wrote summaries, and then Iain verified them. I learned a lot and we both have a lot to bring to the next meeting.

- 3 This week, we began sorting through the materials we'd all found. Together, Iain and I had easily the best materials and summaries to offer. Very little time needed to be spent covering our work because there weren't any questions. John's summaries, though, were difficult to understand and we needed his help in interpreting what he meant. It's not that the materials themselves were bad or anything, but he doesn't seem to have connected all the dots when writing them up. He was embarrassed and told us he'd rewrite them to make them clearer. Marie's summaries were interesting and some were funny, but I wasn't sure how exactly they fit in - and I don't think anyone else could see it, either. Honestly, she seems to need help understanding what we're doing, and everyone is afraid to tell her so. After some awkward moments, Iain asked a few direct but fair questions. As Marie tried to answer, it seemed that she was finally realizing that what she brought was really weak. He didn't push too hard though - probably didn't want to make her feel stupid. We decided to wait for our next meeting to review the new and updated materials from both Marie and John.

I got to relax during the week without any tasks for this project.

- 4 I slipped on some ice on my way to class and had to be rushed to the hospital to set a broken bone and get some stitches - it was pretty bad. They gave me some painkillers and I didn't react well to them. I completely forgot our team meeting until two days afterward, but by that point, I was working hard to try to make up for lost time in all my classes. John emailed me notes from the meeting and I did my best to try to put together my part of the paper, but I know it's not going to be close to perfect. I did spend a few hours on it, but it honestly wasn't my top priority.

- 5 I didn't get to class, but I understand that John turned in the assignment for us. I was able to make it to the meeting this week and, naturally, everyone was surprised to see my cast. They were even more shocked that I'd brought a draft of my portion of the assignment. Of course, they didn't yet know that it wasn't very good.

Iain seemed like he didn't care much this week and was a little bit mean toward Marie. He brought a draft of his portion, but it didn't look like he put much thought into it. There were a number of spots that read "to be determined" and I didn't see any citations or references. Marie almost seemed scared when the team reviewed her work, but I was actually impressed with how much she seems to have improved. Maybe that showed on my face; after she looked at me, she seemed to relax. John and I pointed out a number of rough spots, but I was no longer as nervous about her ability, and she was visibly relieved. Then it was my turn. I explained that my work was still incomplete, and it clearly was, but Marie said that, given the circumstances, even this much was great to have. We didn't spend much time on mine. John's writing was excellent this time. His thoughts were well articulated and he covered all the points he was supposed to - he must be putting a lot of time into this class. Throughout the meeting, Iain was really quiet - which is unusual for him.

Marie suggested we each hand off our portion to another team member for a more thorough review. John volunteered to take Iain's and Iain, in turn, claimed John's. However, I still needed to take more time to finish my section, and Marie, reminding the group of some of Iain's early, insightful comments, asked that Iain look at her work. Marie took John's work for review.

I was in much better shape this week and felt relatively caught up, so I spent about two hours finishing up my section and proofreading it.

- 6 Iain was in class this week, but he emailed the team about an hour and a half before the meeting to say that there was a family emergency and that he would not be able to make it to the meeting. He sent over his progress on Marie's part of the paper.

The meeting was fairly productive, as we were beginning to see the paper take shape. Marie took an odd approach to revising John's section and John seemed to agree, but Marie didn't push it and said she'd change it back for next week. The three of us spent a while just talking about how satisfied we were with the topic. There was a lot of information on it once we understood how to find it, and the consensus was that it's more interesting than any of us expected. Feeling like much of the paper was in good shape, I took the pieces home to assemble them into a full draft to use moving forward - Marie said she still had the earlier version of John's work and she'd give me that piece in the next day or so.

Before the meeting broke up, John asked about switching next week's meeting time so he could meet with another study group. With mid-terms coming, everyone agreed that they needed extra time to prepare. However, we couldn't agree on a new time, so we decided to meet only for 30 minutes instead. Marie sent an email to let Iain know of the change.

I spent two hours assembling and proofreading the document.

- 7 I gave everyone a copy of the document I'd assembled when we started our meeting. After about 15 minutes of what was scheduled to be a 30-minute meeting, Iain had not arrived, so we decided to walk through the document together.

John and Marie were vocal about how impressed they were. As the only one who had read everything through, I felt it was necessary to add a section - now just a placeholder. John suggested that Iain should write it and Marie joked that that would mean John would wind up writing it. They both chuckled, but I wasn't comfortable with it. It's true that Iain hasn't been doing his best work recently, but I still think they're being unfair. I reminded them that Iain helped me in the beginning (even though it might seem like ages ago) and maybe he was just really shaken up by whatever family emergency he went through. They both got quiet and we turned back to reviewing the document.

Once we finished going through the document, the three of us agreed to review it and make notes/corrections/suggestions for next week. As we were all getting ready to leave, Iain popped in the door of the meeting room. Afraid they might say something mean, I quickly asked him if he was doing OK and what had happened. He said his brother was going through something. We made sure he had a copy and knew what we'd all be doing for next week.

I did review the document, but I'd just put it together last week, so I didn't have much to add to it.

- 8 Iain was already there when I arrived at the meeting this week. Marie has got a great eye for detail, as she found a ton of spelling and formatting errors that everyone else missed. I volunteered to take everyone's copies and make all the changes for the draft that we are to turn in next week in class. John pointed out the section that was still missing or incomplete. Iain said it was too late to get it into the draft but that it should be fine to include a note that it will be in the final version. He also made it clear that he wasn't writing it. Everyone else was uncomfortable with that approach. Marie volunteered to draft it and get it to me by the middle of the week. I figured I wouldn't have had the time to do both the writing and the editing, but this I can handle. I agreed to incorporate the new content if she got it to me in time. Iain offered Marie some good suggestions on how to approach the new content.

It took about another hour to apply all the changes, and Marie got the new content to me in plenty of time to incorporate, as well. It probably took me an hour and a half.

- 9 I forgot to provide copies to everyone before class and they seemed upset about it, but I did have one to turn in to the instructor. Now we get to wait for feedback. We do, however, already know of some work that needs done.

Last week, Marie and John (who wound up collaborating on the new section) noticed some problems in the draft that needed to be corrected. Also, it seems Iain didn't do much at all on Marie's work - and John pointed out a number of areas that could be improved. As Iain was getting ready to leave for another meeting, Marie suggested that we add some diagrams to illustrate some of our points. The three of us sketched out concepts and when the group settled, it was clear that Marie was eager to take on this task. No one fought her for it. John offered to reread the entire document. The meeting ended early because Iain had another appointment to get to.

I didn't have much to do this week for this class, so I got to focus on my other classes for a change.

- 10 As I was on my way to the meeting, I heard from Iain. He told me that he'd just got free, front-row tickets to the game tonight, so he wouldn't be coming to our meeting. I can't believe he skipped another meeting, but there wasn't much I could do, so I told John and Marie when I got to our meeting.

John was already looking at the images Marie put together, and he didn't seem to like them much. They were a bit more artistic than we'd expected, but that's Marie! He said they were quirky (and they were), but they included all the right details to get the point across. They were functional but also eye-catching and memorable, and I said so. John seemed to still be a little uncomfortable with them and mentioned that he'd like Iain's opinion, but ultimately just made a few small requests. His changes would make the images less fun, but Marie and I both accepted them because they made John more comfortable.

John made many changes to the document and some of them were pretty big. We walked through them at a high level and everyone agreed, so we moved on to prepare for the presentation. We worked out a basic structure for it and decided that we should each put together notes or a script for what we would say during our part so we could practice. I passed this on to Iain.

Writing up this script took me a while, because I dread the thought of speaking in front of people. I managed to get something down, though.

- 11 In class, our instructor returned the drafts to the groups and we met briefly during class to review it. Unfortunately, while we knew there were lots of problems with that version, the instructor only left five comments in our paper. I guess they wisely expected much of it to change since it was only a draft. One read "this shows promise," two corrected grammar issues, one requested that page numbers be added and one suggested we clarify that section Marie wrote initially, saying it was a novel approach and that it should therefore be explained more clearly and thoroughly.

Everyone arrived on time for our meeting and the discussion began with how little feedback we got and whether this meant the paper was in great shape or that instructor simply didn't really read the whole thing. Either way, we had the feedback we'd been waiting for and it was time to move forward.

Marie asked Iain to review her section again and he declined, saying that he'd already reviewed it once at her request. Marie responded with a snarky tone that she'd like him to "actually read it this time." This turned into an argument with Marie accusing Iain of not participating and Iain responding that her work was of low quality. John jumped in and defended Marie, saying that at least she was showing up and trying. At this point, I raised my voice and everyone quieted down. I reminded everyone of the upcoming presentation, and that yelling at each other wouldn't help us prepare. Iain argued that he didn't have time to go through the entire paper, but reluctantly agreed to take a look at Marie's section again by next week.

The rest of the meeting was spent working through the presentation. The group used a PowerPoint Marie thought to put together in a practice run. We made a few adjustments, but it was nice to have it. Iain really seems to have put a lot of time into his part, and he sounded very polished. He also had lots of suggestions for the rest of us. By the end of the meeting, the presentation was still running too long - particularly John's part. He doesn't seem very experienced at this sort of thing. He included way too much and said it way too fast. He'll have to cut a bunch of it and practice, but with two weeks left, I still feel pretty good about it.

I spent about half an hour revising my portion of the presentation during the week.

12 Everyone arrived on time for the meeting this week.

Iain provided feedback on Marie's section and, in reading through it, it became clear that making his changes would require changes throughout the paper. It was exactly the kind of feedback Marie wanted in the first place. However, so close to the end of class, it would be tough to make them, because no one in our group had the time to carry all the changes through - especially with everyone getting ready for final projects and exams. I can't believe he hasn't bothered to even read the paper until now. What we had wasn't wrong or anything, but these changes would make it stand out. I really don't understand why Iain didn't make the changes when he saw they were needed

I volunteered to make the changes because I think they will make an impression on the instructor. I said I could find time to make the changes this week if someone else would read through it to make sure I didn't miss anything. John volunteered to do that.

The presentation was much better and, after three practice runs, it sounded smooth. While it was still running too long, we agreed that everyone would probably speak faster in class and the instructor probably wouldn't care if we ran over by a little.

Making the changes took me about three hours that I really didn't have to spend, but at least it's done.

- 13 The presentation went very smoothly. I was nervous, but I knew what I was talking about and I think that showed. The audience asked some good questions, which meant that they understood the presentation. For some reason, Iain stepped forward to answer almost every question. It was like he was trying to show the instructor he'd done more than he actually did. Once, John started to answer and Iain seemed not to notice - he just went ahead and answered it himself. Also, we should have discussed clothes beforehand because we all dressed up except for John. He looked out of place in his usual jeans and a sweater.

At our meeting, Iain commented on John's casual clothes, and John apologized. I felt it was unfair, because he was obviously already embarrassed about it. He knew his part and was well prepared, and he has worked hard throughout the project. Aside from that, we all felt good about the work we'd done and I expect we'll get positive feedback and good grades. I shared my updated version of the paper and a quick review of the changes, but everyone knew what to expect and no one was surprised. John took it to do his review and we ended early because there wasn't much else to do.

As we wrapped up, Marie asked John to send her a copy as soon as he was finished so she could take one last crack at it before we turn it in.

- 14 At our final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. Iain volunteered to do a final read, print the document and send it to the instructor. Marie started to attack Iain for not helping the group - I think she felt like he was trying to steal credit for all our work at the end - just like he did in the presentation. John seemed tired and tried to calm her down and I joined him. John suggested that Marie submit the latest version she had at the deadline. If Iain could get his updates to her by that time, great, but otherwise she should use what she had. Iain was annoyed, but agreed.

After the deadline, Marie confirmed that Iain got his changes to her in time for her to submit them, and she sent a copy of the finished product to the entire team.

Week 1

- 1 In group time the first week, we began by setting up weekly team meetings. The rest of the group seem to be freshmen. They're all so nervous about this "huge project" but, as a junior, I know it's not that big of a deal. I just hope that I don't wind up getting stuck rewriting the project at the last minute after they mess everything up.

The project was fairly open-ended, so we brainstormed topic ideas for most of the first meeting. I suggested some of the more obvious topics and was a little shocked when they all loved them. John tried to be involved, but his suggestions were pretty weak. When Marie spoke, I couldn't tell if she was serious or not. Her suggestions were funny, but I'm not sure that was her intent. She definitely has a unique approach. Hannah didn't talk much. She seemed to be paying attention, but I guess she's shy. Pretty soon, everyone built on my suggestions.

Before the meeting ended, we narrowed it down to three ideas. Marie recommended we each look for resources on one topic and then report back next time. It seemed like a good idea and everyone else agreed. I spoke up quickly for a topic that I've done some work on it in another class - it was also the most interesting. John spoke up for another and, after a moment, Marie took the last topic. She didn't sound thrilled about it, though. That left Hannah without a topic, so she said she'd search for additional materials on my topic. She seems nice, but we'll see where that goes.

The research for this week didn't take very long because I was able to use some materials from that previous class.

- 2 Hannah had a breakdown when she arrived because she couldn't find much - she's clearly out of her depth. I pointed out that I'd got more than enough to start with and I offered to work with her after the meeting to give her some tips and tricks.

After reviewing the topics and the materials everyone found, there was fighting over which topic to focus on. Marie decided to start organizing things into lists of pros and cons to make it easier to understand, and then the group held a vote. For some reason, the three of them decided to go with the topic John had researched - even though my topic would be much easier and isn't boring. This makes no sense at all and this whole project's going to be a nightmare.

The obvious next step was to find more materials, so we divided up the major subtopics. We decided everyone would return next week with summaries of what they'd found to make it easier for the group to get moving quickly.

I met with Hannah two days later and she's nice and pretty bright. I showed her how to pull more keywords out of materials and to look in the bibliographies for more ideas. After about two and a half hours, we had some solid references. She went through them and wrote summaries, and then I verified them. She was probably just overwhelmed at first, because she did a pretty good job. Now she's on the right track.

- 3 In this week's meeting, we began sorting through the materials. Together, Hannah and I had easily the best materials and summaries, and we didn't spend much time reviewing it. John's materials, on the other hand, were difficult to understand and his help was required to interpret what he meant. He seemed embarrassed and told us he'd rewrite the summaries to make them clearer. Marie's summaries were interesting and some of them were funny, but I wasn't sure how they fit in. I tried not to look too confused, but everyone seemed unsure of how to respond. After some awkward moments, I asked her a few direct questions that seemed to help her see what we need. The team decided there was still plenty of time, though, and that she could take another week to try again. After all, John would be doing the same.

I got to relax this week without any tasks for this project. Looks like this project isn't going to take too much of my time after all. That's great, because I've got a heavy course load this semester.

- 4 I arrived a little late to the meeting, but Hannah wasn't there at all. She wasn't even in class and no one had heard anything from her. The instructor would tell us if she dropped the class, right?

When it looked like she wouldn't be coming, we began working through Marie's updated materials. John and I exchanged concerned looks. After a few more discussions that were reminiscent of last week, I began pushing to move on and John was happy to join that effort. Marie went with it, even though she was clearly confused. Much less time was needed for John's materials because they were in much better shape now. John volunteered to put together what we had for the assignment due next week, and we both pushed to get started on an early draft. We split up the tasks of synthesizing the sections.

I caught John outside after the meeting ended, and we discussed Marie and Hannah. We discussed the possibility of talking to the instructor, but decided to wait another week or so. I think we can probably use some of Marie's resources. John volunteered to proofread her summaries and I said I'd look for additional content.

My searching was pretty easy, and I only needed to spend about half an hour on both that and summarizing what I'd found. For the first draft of my portion of the paper, I spent about an hour writing - there will be plenty of time to fix it up later, and I have other classwork.

- 5 John turned in our assignment during class, and our instructor gave us some time in class to meet. We discussed our progress, but none of us expected to have this time, so no one brought their materials to review. No one seemed to want to be there, so we all left early instead.

Hannah was back this week and wearing a cast. She slipped on some ice and landed in the hospital for a week. Impressively, she brought a first draft of the section that was assigned to her when she was out - John emailed meeting notes to the whole group.

Marie's constant attempts to be weird are really getting on my nerves. Also, for some reason, everyone seemed to treat this first draft like it was supposed to be the final complete version; everyone was visibly disappointed with what I brought, but that's fine. There's lots of time left. Marie was clearly nervous when we reviewed her work, but I was actually pleasantly surprised by what she'd done. Maybe that showed on everyone's faces because when she looked up at us, she seemed to relax. John and Hannah both pointed out a number of rough spots, but I'm no longer nervous about her ability and she seemed to be visibly relieved. Hannah explained that her own work was incomplete, and it clearly was, but she was in the hospital. The fact that she brought anything at all was awesome. I honestly didn't pay too much attention to John's piece because I figured it was probably pretty good. I started thinking about an upcoming quiz in one of my more advanced classes. I tried to focus and participate, but they didn't really need me there.

Marie suggested we hand off our portion to another team member for a more thorough review, even though I didn't think we were ready for that yet. John immediately volunteered to take mine, so I claimed his - it was in pretty good shape already and that'd give me some extra time to study for my other classes. Hannah asked for more time to finish her section and then Marie specifically asked me to review hers; she took John's. I probably should be flattered, but I'd really rather have the time instead.

Marie took some notes on her work before we traded papers, so that made it pretty quick and easy to make those changes. I quickly read through the whole thing and found that it was kind of a mess. I set it aside so I could spend more time on it later in the week when my other work was done.

- 6 The morning of our meeting, I picked up Marie's paper again but I just couldn't manage to get through it. It seems that she tried hard to be different and come up with a unique perspective, but the end result doesn't cover the main points and really doesn't make any sense. Just as I was starting to make some sense of what she wrote, my brother asked me to come over. He's been having a rough time since his discharge and he told me he needed to get out. I emailed the team to let them know I had to take care of a family thing, sent them what I had and then I drove back home to see him.

I had a massive headache the next morning, but I knew it'd go away and my brother seemed better. Marie had emailed me to let me know they decided to cut the next meeting down to only half an hour to give everyone time to prepare for mid-terms in other classes. A good idea, but I'd have to really rush to make it for a short meeting because one of my own study groups was set to end when this one starts - across campus. As a bonus, though, Marie's paper was out of my hands.

- 7 I arrived late because of the study group and Hannah asked if everything was OK. I explained that something came up with my brother but that he was OK and they gave me a copy of the assembled document - it seems they're further along than I thought! We're all supposed to review the whole document for next week.

The paper looked pretty good, actually. It seems that Hannah put it together well and even identified a new section that will need to be written, as well as a few other changes here and there. They were good ideas, but the new section will certainly have to wait for the final version, because there's no way we can get it written and added into the draft due in two weeks. All told, I probably spent about half an hour going through this version and I didn't have many comments. I didn't spend too much time on Marie's work, either. I just didn't have the energy.

- 8 I arrived early this week. They've been making decent progress without me though, so it's not a problem. This time John arrived late because his exam had run late.

Marie has a great eye for detail, as she found a ton of spelling and formatting errors that everyone else missed. Hannah volunteered to take everyone else's copies and make all the changes for the draft that we are to turn in next week in class. John pointed out the sections that are still missing or incomplete, but I said it's too late to get it into the draft and that it should be fine to include a note that it will be in the final version. I certainly didn't have the time to write it. The rest of the group disagreed with me, though. They decided to try to get it done, and Marie volunteered to draft the two sections and get them to Hannah by the middle of the week so Hannah could incorporate the changes. I couldn't imagine how they can find the time, but I offered Marie some suggestions on how to approach the new content, and everyone seemed to value my recommendations.

Fortunately, I managed to get away with no work for this group this week because my other classes are keeping me very busy.

- 9 Hannah brought our paper to class and turned it in to the instructor. Now we get to wait for feedback while we continue to work.

John and Marie met last week and worked together; while working through it, they noticed a bunch of problems in the draft that will need correcting. Many of them were in Marie's work, and she got upset that I didn't fix them when she asked me to look at it. Why didn't she write it like that in the first place? Eventually, we moved on when Marie suggested we add some diagrams to illustrate some of our points. Even though I had to go to another meeting, I stuck around a bit while the group sketched some ideas. However, I really did have to go and when they seemed to have it under control, I left.

Again, I was lucky not to have much to do in this class this week.

- 10 My buddy offered me his extra seat to the game, and the seats were amazing, so I accepted without realizing this was the night of our meeting. As soon as I remembered, I let Hannah know I wouldn't be there.

When I got back, there was an email from Hannah asking me to look at the report with Marie's images. She also asked me to prepare notes or a script for my part in the presentation so we can practice together next week.

The images were odd, but I sort of liked them.

Preparing for my part took less than half an hour, so I took some extra time and practiced it on a friend.

- 11 In class, the instructor returned the drafts and our team met briefly during class to review it. Unfortunately, while we knew there were lots of problems with that version, the instructor left only five comments in the paper. I guess they expected much of it to change since it was only a draft. One read "this shows promise," two corrected grammar issues, one requested that page numbers be added and one suggested clarifying some of Marie's work. It read that it was a novel approach and that it should therefore be explained more clearly and thoroughly.

During the meeting, we were all on time and the discussion began with how little feedback the group got - we figured that the instructor probably didn't really read the whole thing. Either way, we had our feedback and it was time to move forward.

Predictably, Marie asked me once again to review her section. This annoyed me because I really don't want to look at it again. Marie pushed with a snarky tone that she'd like me to "actually read it this time." Soon she was accusing me of not participating. Maybe I was out of line, but I responded that the low quality of her contribution made it very difficult to work with. John jumped in on Marie's side and then Hannah raised her voice and quieted everyone down. She reminded us of the presentation coming in two weeks and that yelling at each other wouldn't help us get prepared. I said I'd look at Marie's section again for next week.

We spent the rest of the meeting working through the presentation. We used a PowerPoint Marie put together in a practice run. We had to change it a bit, but it was nice to have something there to work with. I think my section is pretty good and offered a few suggestions for everyone else. Even after three rounds of practice and changes, the presentation ran too long - particularly John's part. I suspect he's not very experienced at this sort of thing, because he tried to include way too much and said it way too fast. However, we still have time.

I spent about an hour and a half working on Marie's section during the week. Unfortunately, it really would have been better to get to this earlier because my recommendations will mean changes throughout the paper, and I didn't have time to make them all this past week. Why didn't anyone else see this?

- 12 Everyone arrived on time for the meeting this week.

We began by walking through the changes I proposed, making it clear that these changes would require larger changes throughout the paper. We talked about forgetting them because what we've got is not wrong, but everyone agreed that making the changes would give us a stronger paper. There just isn't much time - especially with everyone getting ready for their final projects and exams in other classes. Fortunately, Hannah volunteered to make the changes this week, if someone else would promise to read through it next week to make sure she didn't miss anything. After a pause, John volunteered. Good that they stepped up because I don't have time for any of this.

This week the presentation was much better and it sounded smooth. While it still ran too long, we agreed that everyone will probably speak faster in class, and the instructor probably wouldn't care if we ran over a bit.

I practiced a few more times during the week when I was able to find a moment.

- 13 The presentation went very smoothly. Hannah was a bit nervous, but she knew what she was talking about and it showed. The audience asked some good questions, which showed that they understood our presentation. I answered most of the questions that came our way because no one else seemed up for it. We should have discussed clothes beforehand, because I came wearing a suit, and Marie and Hannah were both wearing dress skirts and blouses. John looked out of place in his usual jeans and a sweater.

I think we'll get positive feedback and good grades. Hannah shared her updated version of the paper and after a quick review of the changes, which weren't huge. As promised, John took the paper home to review it more closely. We ended early because I had to leave for another group and really there was not much else to do.

As we wrapped up, Marie asked John to send her a copy as soon as he's finished so she could take one last crack at it.

- 14 At the final meeting, we reviewed the paper to make sure it was ready for submission at the end of the week. I volunteered to do a final read, print the document and send it to the instructor, but Marie said she was not finished with it and that she'd like to take some more time with it. She eventually agreed to get it to me the evening of the next day. Hannah suggested that I might not have enough time and asked that Marie submit the latest version at the deadline. She said that if I was able to get Marie my updates by that time, they'd go in, but otherwise we'd send what we'd got. I feel like they don't trust me and that's annoying, but I agreed.

I got Marie the content in plenty of time and she got it in in time. She confirmed this and sent a copy of the finished product to the entire team.

Appendix L: Peer debrief data

Table K1

Comparison and discussion of peer debrief responses to my own analysis.

Peer label	My label	Discussion
Struggling for best fit	Degrees of a behavior	
Analysis by person	Shared vs. individual behavior	
Expect students to experience frustration	Phases not labels	
Referring to definitions	Unfamiliar terminology	
Can't pick just one	Limited options	
All things not equal participation	Other common behavior	
--	Missed details	The peer did not have sufficient familiarity with the narratives to evaluate this one.
--	Hypothesizing alternatives	There was only one excerpt representing this and the peer was unable to see a pattern.
Complaints	Absence of complaints	
--	Comparison with expectations	This relied upon knowledge of earlier events in the transcript and the peer had insufficient familiarity.
Playing psychologist	Vision of dysfunction	
Arriving through elimination	Process of elimination	
Predictive psychology	Categorizing students	
Gender-based	Attribution of allocation to gender	
Judgment	Strategies for evaluation	
Healthy leadership	Student roles	These excerpts showed signs of students taking on roles and 'leadership' was the most prominent of these.
Exerting domination	Shift in power dynamic	
Impediments to valid response	Barriers to diagnosis	
Nature of study	Limitations of study construct	
Clarification	Misunderstood instructions	

Plausibility	Questioning plausibility of narrative	
Presence acknowledged	Researcher feedback	These excerpts represented instances where it was clear that I accidentally broke protocol and communicated more to the instructor than I intended.
Group work is multi-dimensional	Tracking multiple concerns	

Appendix M: Theme tree

Theme	Applications
What instructors noticed.	267
Student intention	39
Shift in power dynamic	19
Student roles and skills	41
Shared vs. individual behaviors	108
When gender played a role	4
Issues related to delivery of instruction	56
Intervention warranted/deficiency identified	27
Discussing objectives	15
Value of group work	14
Strategies for diagnosing behavior.	734
Process of Elimination	110
Evaluating performance by presence of complaints	9
Setting expectations and then measuring actions against them	324
Hypothetical alternatives	1
Comparison with expectations	19
Comparison with experience	95
Vision of dysfunction	12
Understanding student development	39
Categorizing students	94
Making a prediction	64
Weighing the significance of activities	140
Accounting for events over time	31
Equal on balance	72
Evaluating the product	23
Student presence	14
Recourse to literature	9
Telling the story	142
Barriers to diagnosing behavior	514
Not enough information	161
Limited perspective	48
Gender ambiguity	15
Hypothesizing beyond the text	33
Exploring biases	32
Too early	22
Ambiguity	11
Reluctance to label as "dysfunctional"	23
Benefit of optimism	15
Don't prejudge	3
Pejorative terms	5
Experience with the construct of dysfunctional behaviors	155

Unfamiliar terminology	26
Other common behaviors	47
Phases not labels	2
Degrees of behaviors	57
Limited options	21
Frustration happens	2
Lack of formal training on group facilitation	12
Limitations of study construct	126
Researcher feedback	3
Questioning plausibility of the narrative	87
Misunderstood instructions	32
Missed details	4
Cognitive strain	37
Policies for managing long-term group projects	109
Flexibility	8
Break up the group	12
Communications guidelines	3
Contracts	2
Course structures	23
Monitoring	27
Privacy concerns	1
Sympathize with students	7
Train on group work	9
Group time in class	13
Deliberate grouping	4

Curricula Vitae

Micah Gideon Modell

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Education

- Present Indiana University, Bloomington, IN
Anticipated Degree: Ph.D., Instructional Systems Technology
(Minor in Human-Computer Interaction Design)
- 2009 Syracuse University, Syracuse, NY
M.S., Instructional Design, Development and Evaluation
- 2004 International Teacher of English as a Foreign Language Certificate
- 1998 Rochester Institute of Technology, Rochester, NY
B.S., Information Technology

Experience

- 2011 – present **GP Strategies (formerly Option Six) [Bloomington, IN]**
Senior Instructional Designer
- Guidance and mentoring to individuals and project teams
 - Account level strategy development and implementation
 - Internal process development, optimization and process automation
- Instructional Designer*
- Overall design of curricula and courses for clients
 - Coordinate development of content and media
 - Design of assessments
- 2009 – 2012 **Indiana University [Bloomington, IN]**
Associate Instructor and Instructional Designer
- F401: Survey of Serious Games: a three-credit course focusing on understanding and designing games for educational purposes.
 - R341: Multimedia in Instructional Technology: a three-credit course on using modern multimedia capabilities to facilitate instruction.
 - W220: Technology Issues in Computer-based Education: a three-credit course preparing pre-service teachers with limited programming experience to teach the topic to their own students.
- 2006 - 2009 **Red Hat [Global]**
Lead Curriculum Manager (JBoss)
- Re-designed, developed, QA'd and maintained courseware portfolio
 - Taught our courses every four weeks.
 - Designed and tested of customized course delivery environment.
 - Modified courses for virtual delivery.
 - Presentation of curriculum strategy to internal and external audiences.
 - Management of internal team and external contractors.
 - Global customer relations.
- Solutions Architect (JBoss)*
- Technical Sales Support
 - Conference Presentations (Java One)
 - User Community Activity
- 2005 – 2006 **Minjok Sakwon Educational Institute [Jeonju, South Korea]**

English Teacher

- Designed and implemented English language curriculum
- Evaluated learning materials
- Developed and delivered evaluative examinations for my students

2004 – 2005 **GnB English Institute [Jeonju, South Korea]**

English Teacher

- Designed and implemented English language curriculum
- Evaluated learning materials

2003 **TopCoder Software [Glastonbury, CT]**

Product Manager

- Formulated and tested a new software design/development strategy
- Managed a transient team of geographically distributed software developers

2002 **Camp Tel Yehudah [Port Jervis, NY]**

Challenge Course Director

- Managed a staff of seven
- Implemented staff development
- Scheduled and maintained the safe daily operations of a 40ft. high ropes course

1999 – 2002 **Tallan [Glastonbury, CT]**

Technical Lead Developer

- Designed and implemented enterprise software systems
- Researched emerging technologies

1998 – 1999 **Meta4 [Hoboken, NJ]**

Software Developer

- Designed and implemented a database for Year 2000 compliance checking
- Contributed to development of the company's inventory management software

1997 – 1998 **Interactive Digital Communications [Rochester, NY]**

Software Developer (coop)

- Built dynamic websites and multimedia presentations for clients

Teaching

2010 – 2011 **Indiana University [Bloomington, IN]**

Associate Instructor

- F401: Survey of Serious Games: a three-credit course focusing on understanding and designing games for educational purposes.
- R341: Multimedia in Instructional Technology: a three-credit course on using modern multimedia capabilities to facilitate instruction.
- W220: Technology Issues in Computer-based Education: a three-credit course preparing pre-service teachers with limited programming experience to teach the topic to their own students.

2009 – 2010 **Indiana University [Bloomington, IN]**

Assistant Instructor

- F401: Survey of Serious Games: a three-credit course focusing on understanding and designing games for educational purposes.

- R547: Computer Mediated Learning: a three-credit course in which students apply their instructional design skills to development of an online course.
- 2007 – 2008 **Red Hat [Global]**
Curriculum Manager
- One week face-to-face courses on middleware development and administration targeting adult professionals.
 - Two week online virtual training courses on middleware development and administration targeting adult professionals.
- 2006 **Corean4Life Podcast [http://www.csh.rit.edu/~micah/Corean_4_Life]**
Author and Presenter
- English language podcast for learners of the Korean language.
- 2005 – 2006 **Minjok Sakwon Educational Institute [Jeonju, South Korea]**
English Teacher
- English as a Foreign Language for elementary and middle school-aged children.
- 2004 – 2005 **GnB English Institute [Jeonju, South Korea]**
English Teacher
- English as a Foreign Language for elementary school-aged children.
- 1998 **Kids on Campus [Rochester, NY]**
Teacher
- *Myst Maker*: A course for fifth- and sixth-graders in game programming and multimedia development.
 - *Movie Maker*: A course for fifth- and sixth-graders in the digital video editing.

Refereed Publications

- Boling, E., Gray, C. M., Modell, M. G., Abdullah Altuwaijri, & Jung, J. (2014). Learners Interpreting Instructional Images: Meaning-Making and Decision-Making Strategies. *Journal of Visual Literacy*, 33(2).
- Modell, M. G. (2013). Iterating over a method and tool to facilitate equitable assessment of group work. *International Journal of Designs for Learning*, 4(1), 39–53.
- Modell, M. G., Gray, C. (2011). Searching for Personal Territory in a Human-Computer Interaction Design Studio. *Journal for Education in the Built Environment*, 6(2), 54-78.

Refereed Presentations

- Modell, M., Donovan, M. (April, 2015). Maintaining quality in the face of success at The Performance Improvement Conference, San Antonio, TX.
- Modell, M. (November 2014). Designing and validating an instrument for diagnosing troubles with college-level student project groups. ICEM – In Tu, C., Cornell, R., Mclsaac, M., Doyle, R., Pan, C., Yeh, H. (Chairs) Learning Analytics: What is that? Why should I care?
- Modell, M. (November 2014). Developing narratives to detect group meltdowns at AECT 2014, Jacksonville, FL.
- Boling, E., Altuwaijri, A., Modell, M., Jung, J., Howard, C. (April 2013). Images for instruction: The concerns of designers and the focus of learners at AERA 2013, San Francisco, CA.

- Modell, M. (November 2012). Designing a self- and peer-assessment method to grade equitably and reduce social loafing in groups at AECT 2012, Louisville, KY.
- Boling, E., Altuwaijiri, A., Jung, J., Gray, C., Yildirim, C., Modell, M., Howard, C., Ergulec, F., Demiral, M. (November 2012). Learners' Strategies for Interpreting Instructional Images at AECT 2012, Louisville, KY.
- Myers, R., Modell, M. (November 2011). Gamifying the Conference Experience: A Design Case at AECT 2011, Jacksonville, FL.
- Jung, J., Gray, C., Howard, C., Kwon, S., Modell, M., Boling, E., (November 2011). R&T Preparation of Visual Materials to Study How EFL Learners Use Images in the Learning Process at AECT 2011, Jacksonville, FL.
- Modell, M. (February 25, 2011). Continuous Assessment Design Case. Design Showcase at IST Conference 2011, Bloomington, IN.
- Kwon, S., Lara, M., Myers, R., Modell, M. (February 25, 2011). Using Digital Games and Simulations for Learning. Round Table Discussion at IST Conference 2011, Bloomington, IN.
- Myers, R., Modell, M. (February 25, 2011). Gamifying the Conference Experience: A Design Case. Design Showcase at IST Conference 2011, Bloomington, IN.
- Boling, E., Howard, C., Altuwaijiri, A., Caldwell, K., Gray, C., Jung, J., Kwon, S., Modell, M., Whiting, J., Wu, T., Yildirim, C., (February 25, 2011). Visuals for Learning. Round Table Discussion at IST Conference 2011, Bloomington, IN.
- Modell, M., Myers, R. (October 2010). Exploring the Role of Identity in the Design of A Serious Game. Poster to be presented at Meaningful Play 2010, East Lansing, MI.
- Kwon, S., Lara, M., Myers, R., Modell, M. (February 26, 2010). Using Digital Games and Simulations for Learning. Round Table Discussion at IST Conference 2010, Bloomington, IN.

Invited Publications

- Modell, M. G. (2015, May). What technology failures can tell us about supporting our human capital. Performance XPress.

Invited Presentations

- Modell, M. (February 2004). Enterprise Software Development. Computer Science House Lecture Series, Rochester, NY.
- Modell, M. (1997). Mac OS Internals. Computer Science House OS Internals Lecture Series. Rochester, NY.

Professional Service

- Manuscript Reviewer for the Journal of Computing in Higher Education
- Design and support for ISPI University Student Case Competition 2015
- Conference Research Proposal Reviewer for the Academy of Management 2015
- Session Facilitator, AECT 2013 and 2014
- Conference Research Proposal Reviewer for the American Educational Researchers Association 2014
- Faculty Mentor Award Nomination Reviewer, Indiana University Graduate and Professional Student Organization 2014
- Volunteer Instructional designer of Science – South Africa – Kaap de Goode Hoop for e-Learning For Kids 2014 [http://bit.ly/micah_science_course]

- Travel Grant Proposal Reviewer, Indiana University Graduate Students Association 2014
- Technology Director, Bloomington Montessori School 2013-2014
- Chief Openness Officer, AECT 2013-2014
- Research Proposal Reviewer for the Association for Educational Communications Technology Conference 2011 – 2015
- Research Proposal Reviewer for The IST Conference 2012
- Mendeley Advisor [www.mendeley.com]
- Co-Chairman of The IST Conference 2011 [Indiana University, Bloomington, IN]
- Judge of AECT's Multimedia Production Division's Immersive Learning Awards [2010]
- Co-Chairman of The IST Conference 2010 [Indiana University, Bloomington, IN]
- Volunteer at the Association for Educational Communications Technology [Louisville, KY]
- Co-Chairman of the Jeonju English Teacher's Association effort to raise funds for victims of the Tsunami in Southeast Asia [Jeonju, South Korea]

Professional Affiliations

- Association for Educational Communications and Technology [AECT]
- American Educational Research Association [AERA]
- International Society for Performance Improvement [ISPI]
- American Society for Training & Development [ASTD / ATD]
- Academy of Management [AOM]
- Phi Kappa Phi Honor Society
- Computer Science House [Rochester Institute of Technology]

Grants and Awards Received

- Grant-In-Aid Fellowship [Indiana University, 2014]
- Early Career Symposium selected participant [AECT, 2013]
- Best Learning Measurement Approach (Bronze) [Brandon Hall Group Excellence in Learning Awards]
- Judge of AECT's Multimedia Production Division's Immersive Learning Awards [2010]
- School of Education Fellow [Indiana University]

Other Projects

- Self- and Peer-Assessment: Web application to enable educators to collect and monitor regular peer assessment data to facilitate group work [<http://www.PeerAssess.info/>].
- JavaBean Tester: Open source software development tool for assisting with development and debugging of enterprise software [<http://JavaBeanTester.SouceForge.net>].