

# The Para-Universe of Collaborative Group Work in Today's University Classrooms: Strategies to Help Ensure Success

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**Abstract**—Group work, projects and discussions are important components of teacher education courses whether they are face-to-face, blended or exclusively online formats. This paper examines the varieties of tasks and challenges with this learning format in a face to face class teacher education class providing specific examples of both failure and success from both the student and instructor perspective. The discussion begins with a brief history of collaborative and cooperative learning, moves to an exploration of the promised benefits and then takes a look at some of the challenges which can arise specifically from the use of new technologies. The discussion concludes with guidelines and specific suggestions.

**Keywords**—collaborative learning, cooperative computer-supported collaborative learning (CSCL), e-learning, group dynamics

## I. INTRODUCTION AND THEORETICAL VIEWPOINTS

WITH its roots in the work of Piaget, Dewey and Vygotsky [1] and associations with the social nature of learning, group work or cooperative/collaborative learning is an accepted part of teacher education and other university classes [2]-[11]. Although some researchers distinguish amongst the terms “cooperative learning” (a term usually used in reference to group work with elementary school students), “collaborative learning” (a term used for work with older students) and “group work” (a more general term), for the purpose of the current discussion, the terms will be used interchangeably. Indeed, long before the team of Johnson and Johnson [12]-[16] became associated with cooperative learning in the late seventies, in 1958, Ruth Strang [17], who wrote about so many diverse educational issues, wrote in detail about this particular learning format. Today, almost sixty years later, in this vastly different age of internet and constant connectivity and constructivism, many of the strategies, values and challenges which Strang detailed more than sixty years ago, persist. That group work has so solidly stood the test of time is a testament to its intrinsic worth. In university classrooms there are various forms of collaborative learning including online groups in which students work collaboratively on problem-solving with students at universities in other parts of the world and face to face interactions in which students work with peers in real-time formats. We have yet to see a university course outline which does not include some form of collaborative learning. Recently, Del Ringquist [18], a former dean and current professor in political science at Central Michigan University,

remarked that at Central Michigan University, faculty are “encouraged” to have 20-30% of the course grade allotted to “peer-to-peer interaction or collaborative group work.”

Let us examine the early roots of this learning tool. In her book, *Group work in education* [17], Strang offers: a solid definition of group work; a description of its characteristics; a look at the features of the group process; principles of group dynamics; and problems and challenges and speculation about why group work fails.

First, what is a group? Strang proposes that, “a group consists of two or more individuals working together toward a goal...Certain characteristics are considered to be essential to a group. First is an awareness of unity on the part of all its members. A group involves “a bond which unites people into a conscious relationship” (p. 3). Strang continues: “interpersonal relationships comprise the second distinctive features of a group—the dynamic interaction among its members. In this sense a group is a *gestalt*, composed of interrelated parts.” (p. 4). However, an important feature of a gestalt is that it “has properties not derivable from the sum of its parts” [19] or, “so unified as a whole that its properties cannot be derived from a simple summation of its parts” [20]. Clearly, students working as a group are separate entities and I would propose that today, a group could be considered less a gestalt and more a *para-universe* in which the members actively, individually and collectively are, at each moment, creating a common world which dissolves at the end of the project.

Strang goes on to describe three essential characteristics of a group which are still true today, whether we are referring to online or face-to-face group work: a) awareness of some sort of unity among the members; b) ability to act together toward a common goal in a situation confronting the members; and c) dynamic interaction among members” (p. 4).

Collaborative learning or group work, Strang explains, again somewhat idealistically, consists of “planned, shared experiences which foster desirable changes in individual members and in the group as a whole.” (p. 5). Provocatively, Strang describes the group process as including “a free interaction in which each member stimulates others to use their special abilities” (p. 7). We are not sure that students nor professors would today agree with this as it seems a bit idealistic. However, moving on, Strang (p. 30-31) enumerates no fewer than fourteen principles of group dynamics which are important.

*We have paraphrased and summarized these below:*

1. Respect for the individual member and concern for his best development;
2. The group experience is “a means for meeting individual needs, for recognition, for new

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- experiences, for approval, for security, for perspective.” (p. 30)
3. Each member assumes rules that affect the group process
  4. Each member should “feel responsibility for the group activity”
  5. Each member should “listen to others, identify himself with other members and recognize and appreciate their contributions”
  6. Member should “obtain some reward for their responsible participating, such as satisfaction in ‘a job well done’”
  7. While recognizing that a certain amount of homogeneity is necessary for stability, heterogeneity of personality and background should be given equal weight.
  8. A variety of activities gives individuals “opportunities for engaging in rewarding experiences
  9. “The process of getting a problem solved or a job done deserves as much attention as the end product.”
  10. The “feeling tone of the group and emotional security of individuals grow out of the pattern of responses encouraged by the group.
  11. “Psychological principles of learning apply to the group situation”
  12. Cooperation is strengthened when a group tries to attain both group goals and the “hidden agenda” of individual goals.”
  13. Difficulty in communication may cause ...decreased productivity”
  14. Techniques of working with and evaluating a group are means to an end, an intelligent way of getting desired goals. “ (p. 31)

Whether we are working with students in a virtual or face to face environment, most of the problems and challenges with group work proposed by Strang still apply today. These timeless issues include: a) apathy; b) conflict and dissension; and c) lack of consensus. We would also add three others: a) lack of communication which relates to lack of sufficient time to meet and dialogue together; b) miscommunication inherent in the choice of paths of communication such as Facebook, Moodle, email, texting, or online chat; and c) accountability for inclusion and dialogue so that each person feels included and that the workload is fair. In her work on the topic [17] and distinct from the challenges, Strang speculates about why group activities fail. She talks about: a) professors not understanding the values (and we would add communication modes) of the students; b) not having faith in their ability to plan (in our teacher education classes we have never observed this: in fact, our students are exemplary planners); c) that too much time is spent deciding what to do rather than doing it (again, in our teacher education classes, we have never noticed this: students are well aware of time management skills and use them to good effect); d) dissatisfaction of individual members which is often a big problem as with so many talented and hard working individuals, group members differ not only about what to do, but when to do it due to their

varying schedules and work habits; and e) the effect of illness, absence and unexpected personal tragedies or occurrences. As has been mentioned, Johnson and Johnson’s [12-16] work has become the standard guide toward thinking about and implementing collaborative group work. Similar to the qualities Ruth Strang emphasized, Johnson and Johnson of The Cooperative Learning Center at the University of Minnesota, define the cooperative learning situation as “characterized by positive goal interdependence with individual accountability. Positive goal interdependence requires acceptance by a group that they ‘sink or swim together.’” [15] Johnson and Johnson conceive of *cooperative* learning as including certain essential elements: positive interdependence, face-to-face promotive (*sic*) interaction, individual and group accountability, interpersonal and small group skills, and group processing. Today, the phrase “face-to-face promotive interaction” seems curious as is the idea of exclusively face-to-face communication in any dynamic as perhaps most projects of any length necessarily encompass electronic communication.

Importantly, unlike Strang, Johnson and Johnson [15] provide the research foundation foundations of collaborative work:

“When examining the research comparing students learning cooperatively, competitively, and individualistically, a very interesting paradox develops. Common practice in schools today has teachers striving to separate students from one another and have them work on their own. Teachers continually use phrases like, “Don’t look at each other’s papers!”, “I want to see what you can do, not your neighbor!” or “Work on your own!”. Having students work alone, competitively or individualistically (*sic*), is the dominant interaction pattern among students in classrooms (and we would add, universities) today.” [15] Johnson and Johnson continue, “the paradox is that the vast majority of the research comparing student-student interaction patterns indicates that students learn more effectively when they work cooperatively.” [15]

*They go on to stress the following points:*

1) “Students achieve more in cooperative interaction than in competitive or individualistic interaction. With several colleagues, we recently did a meta-analysis on all the research studies that compare cooperation, competition and individualistic learning (122 studies from 1924 to 1980). The results indicated that cooperation seems to be much more powerful in producing achievement than the other interaction patterns and the results hold for several subject areas and a range of age groups from elementary school through adult.”

2) “Students are more positive about school, subject areas, and teachers or professors when they are structured to work cooperatively.”

3) “Students are more positive about each other when they learn cooperatively than when they learn alone, competitively, or individualistically - regardless of differences in ability, ethnic background, handicapped or not.”

4) “Students are more effective interpersonally as a result of working cooperatively than when they work alone, competitively or individualistically. Students with cooperative experiences are more able to take the perspective of others, are more positive about taking part in controversy, have better

developed interaction skills, and have a more positive expectation about working with others than students from competitive or individualistic settings.”

Furthermore, Johnson and Johnson point out that, “Cooperative learning groups have shown to be especially effective where problem-solving, conceptual learning, or divergent thinking are required.”

They go on to note that, “With all the data that is available in this area (we now have collected over 500 studies), it is surprising that practice in classrooms is not more consistent with research findings.”

Johnson and Johnson propose “a basic model” for professor or teacher to ensure that collaboration results in the above positive effects:

1. “Select a lesson and start slowly until everyone becomes acclimatized to the new structure.” As professors and instructors, this strategy seems second nature of course! Then, they propose the following decisions:

a) “Select the group size most appropriate for the lesson” (ie larger groups bring a greater number of resources).

b) “Assign the students to groups.” Here Johnson and Johnson suggest that heterogeneous groups are more powerful than homogenous because “quick consensus without discussion does not enhance learning as effectively as having different perspectives discussed, arguing different alternatives, explaining to members who need help and thoroughly delving into the material.” These are all very useful points and ones which we as instructors are familiar.

Next, they propose that the professor or teacher “arrange” the classroom under the assumption that “group members need to be close together and facing each other, and the teacher as well as members of other groups need to have clear access to all groups.” We must add that today in university classrooms, with classes of over 50 students, this can be a challenge. It is significant of course that Johnson and Johnson do not even mention online collaborative groups.

*Following this, Johnson and Johnson propose that the instructor:*

c) “Provide the appropriate materials ie article to be discussed, etc.”

*Finally, they propose that the instructor:*

d) “Explain the task and cooperative goal structure to the students, adding that ‘a clear and specific description of the task needs to be given coupled with an explanation of the group goal.’ And they mention that: “it is also important to establish criteria for success as a classroom in order to make intergroup cooperation possible and extend the cooperativeness (*sic*) across the class. Importantly, they state that “it is also necessary to specify the basic behaviors you expect to see in the groups so that students have an ‘operational’ definition of what cooperation is.”

All these are important and useful steps and even though we agree with each, they are worthy of both mention and review. Often at the university level, we assume competency and familiarity with group work rather than spending time on the details to ensure its success.

With regard to the actual collaborative process in the classroom, Johnson and Johnson propose that the instructor

should monitor the groups as they work: “The teacher needs to monitor carefully how well the groups are functioning; determine what skills are lacking, both related to the subject matter and to the interaction; set up a way for the groups to process how well they functioned and discuss how to do even better; and intervene where problems are serious to help groups work out their own problems. It is probable that some specific instruction will need to be focused on interpersonal skills as students will not have necessarily learned how to work with others effectively.” Hopefully this is not a serious issue at the university level one would think. However, my personal experience as I shall detail will prove otherwise.

It should also be mentioned that monitoring group work is a much bigger challenge in university than high school classes unless the professor allows time for students to do most of the work within the class time and then monitors and handholds each group and their interaction and progress. One would certainly hope that constant monitoring is less necessary in university classes, that indeed there is actual growth and development taking place vis-a-vis group learning. Indeed there are two underlying assumptions. The first is that today we assume that students enter university with some experience working in groups. The second is that in university, hopefully there is some autonomy and student ownership of the group’s task and modus operandi and that they are not merely spouting back exactly what the teacher wants or merely attempting to “please the teacher” but are taking responsibility and ownership of their learning explorations.

Johnson and Johnson [15] note that, “it is important to note that the cooperative group does not take the place of instruction, but instead translates it and makes it useful. The teacher will still need to introduce new material and students will need to research and study so that they have something to share with their peers within the group.”

They go on to point out that “teachers in the school districts and colleges where we have been working have mastered the strategies for structuring cooperative learning groups and the techniques for teaching interpersonal skills so that now they automatically can set up lessons cooperatively and monitor them effectively. In addition, they have learned to be more careful in setting up appropriate individualistic and competitive learning situations.” In my mind, we have never really “mastered” anything that happens in the classroom and that the strategies we use with students are never fully foolproof.

As well, in the university world of today, online communication is an important aspect of even face to face classes as we seamlessly integrate technology in all our communications. Thus, it would also seem that the challenges or perils of collaborative learning and group work are more evident in an exclusively online environment such as distance education courses, due to the fact that the communication path is so restricted. Physical features as eye contact, intonation, tone, the judicious use of humor, clarifying when it is evident through puzzled expressions that things are not clear are clearly present. However, it must be acknowledged that today, even face to face classes exist within an online universe due to the fact that most of us “live” online and often use online over

face to face communication for reasons of expediency and ease.

## II. COLLABORATIVE GROUP WORK AND NEW TECHNOLOGIES

In the early nineties, when new technologies were just beginning to become commonplace, another researcher, Cohen [17] provides a description of the benefits of collaborative group work:

“Groupwork is an effective technique for achieving certain kinds of intellectual and social learning goals. It is a superior technique for conceptual learning, for creative problem solving, and for increasing oral language proficiency. Socially, it will improve intergroup relations by increasing trust and friendliness. It will teach students skills for working in groups that can be transferred to many student and adult work situations. Groupwork is also a strategy for solving two common classroom problems: keeping students involved with their work, and managing instruction for students with a wide range of academic skills. [17, p. 6]

More recently, Cohen et al [21] observe that “over the last ten years, cooperative learning has become accepted as one of the “best practices” in education [p. 3]. Furthermore, “cooperative learning is a powerful approach to learning because it is both an effective pedagogy and a compelling philosophy and worldview. Through teacher education programs, we can provide professional training that educates teachers both to effectively implement cooperative learning in their classrooms and to develop a more reflective consciousness about cooperation as an idea and value and its application to schools and society. Other studies [19]- [23] on the efficacy of online collaborative learning in university courses have proliferated in recent years and thus it certainly is a prominent learning tool regardless of instructional context.

Most recently, in the Education Africa blog [24] posting of February 4, 2011 entitled, “Collaborative learning: a reality in universities” Naikumi Mary writes that collaborative learning at the university level “has many benefits including: the fostering of higher level thinking skills; increased retention of knowledge and skills; fostering of individual self esteem; enhancement of learners’ satisfaction with the learning experience; the development of social interaction skills; the promotion of positive race relations among different countries or across nations; and the promotion of an environment of active, involved, exploratory learning.”

## III. PUTTING IT INTO PRACTICE: CLASSROOM REALITIES

We use group work in my teacher education classes and the results are generally positive. We utilize two different formats: one in which students must give a presentation to the class on a specific topic and the second, with different grouping, in which students have discussion groups about specific articles. Thus each student participates in two different groups with two different sets of participants. Both are randomly selected. However, it seems that each year in the classes of about fifty students with eight or ten groups, there is one group or usually a single person who has a challenge with working optimally in a group. To illustrate, in one discussion group for the final class, a student had signed up at the beginning of the term to

lead the discussion on a certain article which would take place close to the end of term. Much to the group’s surprise, at the very moment he was to lead the discussion about this particular article, he announced to his group that We had given permission for him to duplicate the very discussion questions which had been presented by another group member the week previous: the very same article and the very same questions . Of course, We had not granted permission for such flagrant—albeit remotely useful --duplication of the previous week’s discussion. However, no student came to query me because this student had assured them that we had given him permission. Later, when we spoke to him about this, he confessed that he had taking the liberty of misleading the group because he felt inadequate to the task and overwhelmed by the assignment. Thus group work—despite following guidelines and ensuring that students understand what to do, and even circulating and listening in on group discussions and despite the fact that the students in that group worked well together, this one student failed to be a cohesive part of the group and maximize the learning opportunity for himself. We found these unusual and unpredictable events both surprising and discouraging. Another incident was equally upsetting. This particular group had decided to communicate by text message about a group presentation but somehow, a few days before the presentation, as the work was mounting and tension increasing, one student missed the email that the group would be communicating through text messaging and although she tried to contact the others, they appear not to have received any of her messages. Since she was responsible for coordinating the power point presentation for the entire eight person group, they were alarmed and thus decided to do it themselves when they could not contact her. She was equally alarmed and created an entire power point independently, in effect, doing the work of all eight participants in a very short time—not surprisingly, considering her sense of responsibility, it was excellent.)

From my perspective and from that of the rest of the class, the presentation was completely professional and comprehensive and the transitions amongst group members seamless—a tribute to each group members sense of professionalism and moving beyond personality issues to focus completely on the final product. Thus, however careful one is, in the small para-universe of the collaborative group, unfortunately, there is always room for omission, surprise and hurt feelings.

As has been mentioned by both Strang and Johnson and Johnson, the first decision in setting up collaborative learning is to decide grouping criteria. Since my students are diverse and usually do not know each other, as Johnson and Johnson suggest, We use a random grouping method of either taking students names in the class list and dividing the class into groups of 8 students with the suggestion that they will further subdivide into dyads or triads to work on specific components of an introductory presentation of a chapter of the text. They are given the direction to ensure that group members communicate and have back up modes of communication just in case. The assumption with our students is that they are adults and are used to working in groups. However, as is

illustrated by the above unfortunate experiences, this is not always the case. Nor do students typically-- in the last few often frantic days before a presentation--take the time to explore these back-up modes of communication. Instead, they naturally are more inclined to leap to erroneous conclusions about abandonment and venture off independently from the group as a whole.

In truth-- if we may be candid-- each of us as educators, sees the locus of control as lying with ourselves rather than the students. Like Prospero in Shakespeare's "The tempest" as teachers and instructors, we mistakenly believe that we have almost--if not complete--control of our classroom "world". However, more accurately, we have a limited sphere of influence whether it be in minor distractions such as students not pulling their weight or being proactive in preventing last minute misunderstandings amongst group members. Thus we are important as guides but we are certainly not as omniscient and all-powerful as we (and some students) might wish. We may implement the guidelines proposed by Strang and Johnson and Johnson but the results are not always fully predictable. To think there is a foolproof method of instituting collaborative group work is erroneous. But working collaboratively is a strategy not restricted to education in today's global environment: it seems to be the predominant mode of achieving results in many domains.

#### IV. CONNECTING WITH OTHER DISCIPLINES

Recalling Ruth Strang's earlier proposition of a group being a gestalt, Baghai and Quigley[28] from the world of business administration, begin their discussion of collaborative work with a provocative idea: "As one". It's a short phrase. Only five letters, But those five letters are filled with meaning and inspiration. They make all the difference between a group of individuals and a unified team. These five letters symbolize the culmination of individual action into collective power. They describe how individuals can collaborate to achieve extraordinary results -- together. (p.1) Baghai and Quigley propose a new definition of collective leadership centred around the issues of people (who), purpose (what) and productivity (how) (p. 6). These authors posit no fewer than eight metaphors or models of working collaboratively in small groups under a leader's direction. These include: a) landlord and tenants; b) community organizers and volunteers; c) conductor and orchestra; d) producer and creative team; e) general and soldiers; f) architect and builders; g) captain and sports team; and h) senator and citizens. Of the six relationship metaphors from which leaders--and We would include professors--can determine those with which they feel most comfortable, it would seem that those of conductor and orchestra or community organizer and volunteer would be the two extremes most applicable to university education class group work.

Baghai and Quigley propose that the six key characteristics of the Conductor and Orchestra model are that: "(1) orchestra members have clearly defined roles and tasks; (2) orchestra members are given detailed and scripted processes to carry out with utmost precision; (3) uniformity of orchestra members is critical to reinforce standardization and efficiency; (4)

extensive training and orientation ensure the orchestra's tasks are precisely performed; (5) people primarily join the orchestra to pursue their own personal interests; and (6) there's a close relationship between compliance and incentives." (p. 105). As one of the illustrations of this model, Baghai and Quigley mentioned the work of Jose Antonio Abreu who founded El Sistema, "a national organization of 102 youth orchestras, 55 children's orchestras and 270 music centres with more than 250,000 musicians. Baghai and Quigley explain that "in his acceptance speech for a US Technology entertainment Design (TED) award in 2009, Abreu said, "in its essence, the orchestra and choir are much more than artistic structures, they are examples of schools of social life because to sing and to play together means to intimately coexist toward perfection and excellence, following a strict discipline of organization and coordination in order to seek harmonic interdependence of voices and instruments. That's how they build a spirit of solidarity and fraternity among them." [28, p. 117] depending on teaching style, it is easy to see how this metaphor is both illustrative and helpful of those educators who are more teacher- and subject- than student-oriented.

At the other extreme is the community organizers and volunteers metaphor. Baghai and Quigley [28] propose six key characteristics of this model: "(1) volunteers view themselves as highly independent decision makers; (2) volunteers want frequent opportunities to express their opinions; (3) volunteers choose to opt into campaigns case by case; (4) community organizers often use narratives to motivate the volunteers; (5) volunteers are usually treated the same and have equal rights; and (6) community organizers' power increases as the number of volunteers grows" (p. 71). The example proposed by Baghai and Quigley to illustrate this model is that of Linux, the software giant. The head of the company, Linus Torvalds, is "just Linux's gatekeeper. He's not really in control--he's called project leader...Being disorganized can actually leverage that knowledge more effectively than a command-and-control hierarchy. Innovation must rely on creativity generated by the mass of folks underneath. In a dynamic system, trial and error is a powerful force for change. A bottom-up system with a gatekeeper can be more innovative than the hierarchical system over which Gates (of Microsoft) reigns." (p. 68).

As is surely no surprise in the current economic situation in which university students regard themselves more as clients shopping for a good fit with the university program at a hefty price than as grateful recipients. Today's students are independent decision makers and are now seeking often education as a means to a second career and are very committed to the quality of their own learning. As one student remarked to me, "We pay no attention to my GPA and instead focus on maximizing my own learning regardless of what the prof seems to require." Not all students are like this of course. In dealing with such independent and motivated learners as well as those who are less assured and more dependent on instructor direction, a university instructor using group work must ideally both provide specific direction like an orchestra conductor but also allow the groups a great deal of autonomy as they are after all, present by choice in one's class.

Considering that our classes are heterogeneous in terms of maturity and self-direction, the younger students will inevitably find gentle direction and freedom of choice confusing whereas more independent and self-directed students will find less direction inspiring and energizing. Thus, far from Strang or Johnson and Johnson's absolute guidelines, Baghai and Quigley propose multiple possibilities of leadership for teaching learning and of course, collaborative group work. Perhaps each leader/teacher has to listen to his/her inner voice in order to identify their own innate style of leadership. And of course, when at all possible, this style of leadership will be modified according to the needs, maturity and abilities of the students.

In truth, in setting up the parameters and working guidelines for collaborative group work, the challenges are no longer primarily as Strang [17] had proposed: a) apathy; b) conflict and dissension; and c) lack of consensus. Instead--as has been illustrated through a description of the challenges with today's university students almost sixty years later--the three major obstacles seem to be: a) the almost insurmountable challenge today with crushing job, course and family commitments, of finding *time* to meet in either real-time (or even just real-time chat); b) *modes of communication* used and students either choosing not to respond or being unintentionally excluded; and of course c) *integrity* or *accountability* issues when a group member seems to--or in fact does--betray another or others.

However, regardless of individual inherent teaching style--which of course needs to be acknowledged and taken into consideration, what specifically can instructors--and indeed students-- do to minimize these challenges offered by collaborative group work? First, as far as instructors, giving clear and specific guidance is necessary with regard not only to the learning outcome or the task to be completed but also the procedural elements, or the process. Second, time and space needs to be devoted to group work within the class time so that students are not left to negotiate this for themselves, although with the challenge of different groups working at different paces and with differing deadlines for the group presentations, this will always be difficult. Finally--or perhaps initially--having a frank discussion about experiences with groups and talking about challenges openly from the first class, is a very helpful way to begin and bring issues out into the open.

Having said this, and as was illustrated above, We know that discussions can appear to be working productively on the surface when actually, there are difficulties which the students will obscure from the instructor so as not to appear uncooperative. As well, as was also illustrated above, often the last moments of preparation for a presentation are when much crucial work is done and many students, whether as a result of learning style or time management, work especially well at the last minute. When there are unexpected difficulties, illnesses or problems with hardware or materials, the group process will break down and there is little that can be done at that stage. However, without appearing too overbearing and interfering with the healthy autonomy of the group process, channels of communication amongst group members need to be specified and documented. It is really essential that group members

understand and use back up strategies, such as phone calls and alternate emails or texts or other methods of communication.

It goes without saying that throughout the process, the instructor needs to make clear that help is available during the process. We often wish that We could have individual interviews with each group member throughout the process: becoming a sort of Prospero in this little universe. However, professors are not all-controlling nor omniscient, and despite one's best efforts, communication amongst group members is fluid, dynamic, fraught with misunderstanding--indeed often imperfect. For it is when communication breaks down that we learn that even in the hopefully more controlled environment of the classroom, the instructor and collaborative group work is not as perfect as we had hoped or planned. On the other hand--as is noted in so many resources about collaborative learning, by leaving students to work things out amongst themselves, the results can achieve an outstanding excellence which would not be possible if the instructor is too present within each group. Two examples will suffice.

We well remember a group presentation on *Persepolis* in which the group members, through their collaborative work, devised a creative model through which to explore the heroine's journey: private vs public spheres with regard to identity formation. This was completely exciting, unique and insightful to our class discussion of the novel. As one student in this group described the situation, this journey was mirrored in the group dynamic. He points out that with each person having strong and individual ideas and perspective regarding the approach, "clashes of opinion needed to be addressed and overcome... Moreover, the end result had to be good enough to outweigh the five previously-held individual opinions..." Significantly, he concludes that, "in the same way that Marji's initial perspective was challenged by external factors before she could come to a new-found identity, each member of our group's initial perspective was challenged by other group members before we could come to an agreement on how we would focus and present our work." [30] The presentation was described by one class participant as "compelling not only in its content but in its focus, cohesion and flow across the various elements explored". Indeed, it is not too much to say that this group led the larger class to new depths of insight as a result of the presentation that evening. This is certainly one stellar explanation of what collaborative group work can be at its finest in terms of both process and product. It is an example with which Strang, whose definition of a group as "a bond which unites people into a conscious relationship" [1, p. 3] would agree and applaud: group work can result in a gestalt, even amongst students who were formerly strangers before their intense very short-lived work toward a common goal. But it takes a very extraordinarily group consisting of extremely dedicated and motivated individuals to arrive at such a pinnacle of communal creation, learning and teaching.

In another example, the group was charged with exploring and explaining semiotics to the class. They decided independently to present the introduction as a metaphor and each member of the class was given a rose along with the instructions to pluck a petal from the rose and then answer the question, "Is this still a rose?"; pluck another petal and answer

the same question and so forth. In other situations as well, the innovative approaches by particular groups to challenging theoretical issues have been exemplary and unforgettable learning experiences for the class. I am not sure that the results in either of the above situations would have been as brilliant with a teacher hovering and watching over them the entire time.

## V. CONCLUSION

Issues surrounding group work at the university level can be complex, unpredictable yet also enriching and rewarding. Strang's description and guidelines as well as the model proposed by Johnson and Johnson, make the steps seem foolproof—if not obvious—but, as this discussion demonstrates, the results are not. Exploring differences in the development of student thinking and seeking models from other disciplines, such as the management models proposed by Baghai and Quigley, shed further insight on both the challenges and possibilities of group work. And the difficult and often heartbreaking challenges—as well as the inspiring strengths—that arise, are as unique as the failings and extraordinary talents of the students.

Sometimes, these are opportunities when each group member's sense of professionalism feels tested and this is a sobering testament to the fact that in this little universe of the group, as in life, the unpredictable will include both moments of despair and yet also moments of brilliance and profound insight. We can only keep a watchful eye and continue to refine our directions and practice with collaborative learning groups based on experience, and trust that, to paraphrase Goethe, "kindness (and hope) is the golden chain by which society (and our collective worlds) are bound together."

## REFERENCES

- [1] O. P. Dillenbourg, M. Baker, A. Blaye, A. & C. O'Malley. The evolution of research on collaborative learning. In E. Spada & P. Reiman (Eds.) *Learning in Humans and Machine: Towards an interdisciplinary learning science*. 1986, (Pp. 189-211). Oxford: Elsevier.
- [2] M. Beckman. *Collaborative Learning: Preparation for the Workplace and Democracy*. College Teaching, 1990, 38, 4, p. 128-133.
- [3] K. Bruffee. *Collaborative learning: higher education, interdependence, and the authority of knowledge*. Second Edition. Baltimore: The Johns Hopkins University Press, 1999.
- [4] M. Collay, D. Dunlap, W. Enloe, G.W. Gagnon, Jr. *Learning circles: creating conditions for professional development*. Thousand Oaks, CA: Corwin Press, 1998.
- [5] S.B. Fiechtner, S. B. and E.A. Davis. Why Some Groups Fail: A Survey of Students' Experiences with Learning Groups. In A. Goodsell, M. Maher, V. Tinto, and Associates (Eds.), *Collaborative Learning: A Sourcebook for Higher Education*. University Park: National Center on Postsecondary Teaching, Learning, and Assessment, Pennsylvania State University, 1992.
- [6] A.S. Goodsell, M.R. Maher, V. Tinto, B.L. Smith, & J. MacGregor, J. *Collaborative Learning: A Sourcebook for Higher Education*. University Park, PA: National Center on Postsecondary Teaching, 1992.
- [7] A.M. O'Donnell, C.E. Hmelo-Silver, G. Erkins. Eds. *Collaborative learning, reasoning and technology*. Mahwah, New Jersey: Lawrence Erlbaum, 2006.
- [8] Najmi, A., Blackwell, D. & Warren, S.J. Examining Self-regulated Learning in Post secondary Learners through Problem based Learning (PBL) and Game play. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 575-582). Chesapeake, VA: AACE. Retrieved from <http://www.editlib.org/p/36332>
- [9] R.A. Schmuck, P.A. Schmuck. *Group processes in the classroom*. Seventh Edition. Boston, Mass: McGraw Hill, 1997.
- [10] R. Slavin. *Cooperative learning*. New York: Longman, 1983.
- [11] Svensson, A. (2011). Challenges for Collaboration in E-learning: Towards an E-learning Pedagogical Practice. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 777-785). Chesapeake, VA: AACE. Retrieved from <http://www.editlib.org/p/36371>
- [12] D. Johnson and R. Johnson. *Learning together and alone, cooperation, competition, and individualization*. Englewood Cliffs, NJ: Prentice-Hall, 1975.
- [13] D. W. Johnson, R.T. Johnson. *Learning together and alone: cooperative, competitive and individualistic learning*. Third Edition. Boston: Allyn and Bacon, 1991.
- [14] D. Johnson and R. Johnson. *Cooperative Learning*. [Online] 15 October 2001. Available at: <http://www.clcrc.com/pages/cl.html>.
- [15] D. Johnson and R. Johnson. An Overview of Cooperative Learning. [Online] 15 October 2001. Available at: <http://www.clcrc.com/pages/overviewpaper.html>.
- [16] R. Johnson and D. Johnson. Cooperative learning: two heads learn better than one. In Available at: <http://www.context.org/ICLIB/IC18/Johnson.htm>
- [17] R. Strang. *Group work in education*. New York: Harper Brothers, 1958.
- [18] D. Ringquist. Conversation in Caen, France, 8 PM July 27, 2011.
- [19] Dictionary meaning of gestalt at: <http://www.merriam-webster.com/dictionary/gestalt>
- [20] dictionary meaning of gestalt at: <http://www.thefreedictionary.com/gestalt>
- [21] E.G. Cohen. *Designing groupwork: strategies for the heterogeneous classroom*, Second Edition. Columbia University, New York: Teachers College Press, 1994.
- [22] E.G. Cohen, C.M. Brody and M. Sapon-Shevin. Eds. *Teaching Cooperative learning: the challenge for teacher education*. Albany, NY: State University of New York Press, 2004.
- [23] S. Kurtts, K. Hibbard, & B. Levin. Collaborative Online Problem Solving with Preservice General Education and Special Education Teachers. *Journal of Technology and Teacher Education*, 13(3), 397-414. Norfolk, VA: AACE, 2005.
- [24] M. Liu, D. Kalk, L. Kinney, & G. Orr. How Web 2.0 Technologies Are Used in Higher Education: An Updated Review of Literature. In J. Sanchez & K. Zhang (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2010* (pp. 2604-2615). Chesapeake, VA: AACE, 2010.
- [25] K. Lee, B. Bos, & K. Turnbull. Online Teacher Education Course Redesign: From Stand-Alone Activities to Content Area Design Teams. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 443-448). Chesapeake, VA: AACE.
- [26] N. Davis, N. Dabner, J. Mackey, L. Walker, A.M. Hunt, D. Breeze, D. Morrow, C. Astall, & J. Cowan. (2011). Converging Offerings of Teacher Education in Times of Austerity: Transforming Spaces, Places and Roles. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 224-229). Chesapeake, VA: AACE
- [27] D.M. Baylen, R. Santiago, & M. Nakayama. Collaborating in Virtual Spaces: GoogleDocs, Group Work, and Online Learning. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 133-138). Chesapeake, VA: AACE
- [28] M. Baghai & J. Quigley with Aijala, A; Challah, S. & Vorster, G. *As one: individual collective power*. London: Penguin, 2011.
- [29] N. Mary. (2011). Collaborative learning: a reality in universities. Blog post at: <http://blog.education-africa.com/archives/750>
- [30] J. Papineau-Wright. Unpublished Persepolis reflection paper, 2010.