

INTER-GROUP COMMUNICATION AMONG CROSS-DISCIPLINARY STUDENT TEAMS: AN EXPLORATORY STUDY OF PROCESS AND EFFECTS

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ABSTRACT

Tasks that face business organizations often involve cross-disciplinary teams. A special case is when teams from one organization interface with those from another organization to achieve a mutual objective. An experiential semester-long student project that simulates this real world situation is the focus of this study. Student projects involved five "client teams" from a marketing course in Product and Market Planning that interfaced with one of five "advertising agency teams" from a communications course in Communication and Product Information. This research investigates the process and effects of group dynamics both within and between groups. It was found that inter-group communication has little or no effect on intra-group processes, but does have a positive and significant effect on two outcome measures: project grade and student satisfaction. Based on study findings, recommendations are given for improving the quality of inter-group communications and, thereby, the value of the project experience.

INTRODUCTION

An overview of pedagogical literature indicates an increasing trend toward the use of experiential exercises in college classes to complement or replace the passive lecture-discussion learning paradigm (Barr and Tagg 1995; Guskin 1994; Kolb 1984; Titus and Petroschius 1993; Drafke, Schoenbachler, and Gordon 1996). Experiential exercises are often conducted in groups to better simulate what it is like to work in the corporate world (Bowen et al. 1994; Goretzky 1984; McCorkle, Reardon, Alexander, Kling, Harris, and Iyer 1999; Williams, Beard, and Rymer 1991). This approach allows instructors to increase class project complexity levels. Addi-

tionally, group projects create an environment in which students can develop cross-disciplinary transferable skills, such as leadership and interpersonal communication (Porter and McKibbin 1988; Pica and Detrick 1997).

On occasion, the classroom group project approach has been augmented by designing tasks where groups in one class work with groups in another class. This type of assignment simulates the use of cross-functional or cross-company teams. Bobbitt, Inks, Kemp, and Mayo (2000) and Darian and Coopersmith (2001) raise important implementation issues to consider. An example of these issues may be found in a situation in which the professor seeks ways to ensure that

the project combines theory and application. They conclude that the overall reaction by students to “cross-functional group projects” is generally positive.

This study extends previous research findings on group dynamics among cross-disciplinary student teams by analyzing the relationships between inter-group communication quality and long-established measures of intra-group behavioral components, such as cooperative group norms and team functioning. In addition to group process implications, direct relationships between inter-group communication quality and outcome measures of project (course) performance and course satisfaction are tested.

The paper makes four contributions. First, a new measure of the quality of inter-group communication is developed and tested. The scale of inter-group dynamics gauges the extent to which groups in one course effectively coordinate problem-solving efforts with groups from another course. While other researchers have studied aspects of such a conjunctive problem-solving task (Strong and Anderson 1990; McCorkle et al. 1999; Chatman and Flynn 2001; Corbin 2002), studies have not employed measures of inter-group communication quality.

Second, inter-group problem solving is analyzed in an open-systems framework that includes intra-group components. Doing so affords a comprehensive understanding of processes at work in cross-disciplinary group problem-solving behavior. The study examines the degree to which inter-group communication affects the relationship between intra-group process components and measured outcomes of project (course) grades and course satisfaction.

Third, because of the longitudinal nature of the study underlying group processes at two points in time are illuminated. The analysis describes temporal aspects of within-group and between-group dynamics, and their interrelations. The importance of the temporal dimension for studying groups has been highlighted by

Mcgrath, Arrow, and Berdahl (2000; see also Corbin 2002). They urge the development of conceptual and methodological tools to study stability and changes in processes that characterize groups. They urge researchers “to recognize the importance of both the past and the future on group structure and behavior” (p. 103).

Finally, an instructor’s template for inter-group assignments to simulate real-world corporate client-advertising firm relationships is presented. Instructors cannot assume that either intra-group or inter-group priorities are integrated easily (Anthony, DeMoranville, and Aurand 2002; Wolfe and Putler 2002). Hence, course design strategies are presented to promote integration of group processes and to enhance course outcomes.

CONCEPTUAL BACKGROUND

Our premise is that it is pedagogically sound to incorporate experiential exercises into the classroom. Having students work in groups has been shown to be a viable learning paradigm (Barr and Tagg 1995; Guskin 1994; Kolb 1984; Titus and Petroschius 1993; Drafke, Schoenbachler, and Gordon 1996). In addition to being able to increase the complexity of the assignment(s), group projects provide a rich environment that allows students to go beyond learning discipline-specific knowledge (e.g., marketing theory and concepts); group projects afford the opportunity to develop non-discipline related transferable skills, such as leadership and teamwork skills (Pica and Detrick 1997). (For an excellent review of the advantages and disadvantages of group projects, see McCorkle et al. 1999.)

In this section four constructs are introduced that have been shown to affect a group’s performance, in the absence of inter-group interaction. These constructs are team functioning, group norms, task specialization, and goal clarity. The effects that inter-group communication has on these dimensions when completing a conjunctive task are hypothesized. This research fills a gap in

the literature, since no previous investigations have examined the effect of inter-group communications on intra-group processes and problem solving outcomes.

The first of these constructs, *team functioning*, involves the extent to which interpersonal relationships and roles of group members are healthy and productive. Problems in team functioning may stem from inadequate communications, thereby resulting in excessive conflict (Strong and Anderson 1990; Batra et al. 1997; Williams et al. 1991). Social loafing is another impediment to productive team functioning. It comes in many forms: missing meetings, being ill prepared, lacking motivation, doing poor quality work, etc. Peer evaluation forms have proved successful at identifying free riders for grading purposes, but they do not serve to rectify the problem. Requiring peer evaluations, however, does improve students' attitudes toward group projects (Chapman and Van Auken 2001). Pedagogues have suggested a variety of tools (Batra et al. 1997) and group project implementation techniques (Strong and Anderson 1990; Corbin 2002) to increase the likelihood that team members will do their share of the work. Some techniques and tools are time consuming to implement and may therefore not be practical, while others that are easier to implement have not seemed to work well. In short, it is safe to assume there is no universal panacea to avoid free riding in teams.

Group norms are shared standards that address issues concerning intra-group expectations such as harmony, expected levels of cooperation, and willingness to make sacrifices. These norms influence how a group's members interact and solve problems (Chatman and Flynn 2001). Group norms develop according to the principle of primacy (Paez and Marques 1998). The primacy principle asserts that early group behavior patterns are likely to indelibly shape group expectations. As a general rule, group norms are formed relatively early. The initial formation of sub-sets of group norms leads to consistency of expectations as the group continues to function. The

primacy principle for group norms formation enables group members to function rapidly under more predictable expectations and greatly simplifies group activities.

Group performance may be affected by the extent to which members specialize in their tasks. Some projects are disjunctive (Strong and Anderson 1990), opening the door for specialization of labor. In such circumstances *task specialization* may be optimal from a team performance perspective; yet, task specialization may result in students graduating with narrowly defined areas of expertise (McCorkle et al. 1999), a clearly undesirable situation.

Lastly, lacking clear direction or *goal clarity* group performance will suffer. The onus is on the instructor to ensure that (a) course goals are clear, and (b) intra-group communications are encouraged to reinforce and maintain goal clarity as problem solving proceeds. In situations where goal clarity is readily achieved, this group process component will not be able to account for differences in the quality of team outcomes.

Thus far four factors have been introduced that affect the performance of a group's functioning within its own boundaries. In the real world, however, two (or more) teams often have to pull together to reach an overall goal. A good example is a marketing team within a corporation that partners with an advertising agency for the mutual purpose of successfully introducing a product to market. This is a classic conjunctive problem – success is predicated on both teams working jointly on overlapping tasks to achieve success. We, therefore, developed an empirical measure of a new construct: *quality of inter-group communication*. The measure is called the QUIC scale. In principle, the performance quality of two teams working together depends on the extent to which there is good communication, sharing of helpful information, comradery and confidence between the two groups. The QUIC scale captures the extent to which two groups are successfully managing their relationships.

Inter-group communication is the central, organizing feature of the conceptual model employed for this exploratory research on problem solving by cross-disciplinary student teams. The constructs and outcomes examined are illustrated in Figure 1. Inter-group communication noticeably differs from that of intra-group communications and its four associated component processes because of the clearly demarcated boundaries between groups, the different perceptions and expectations of each group (often represented by different educational experiences and professional orientations of team members), and differences in expected requirements from each. Outside of a group's boundaries, and between groups, norms are more diffuse and difficult to control. Further, there is less continuous feedback on the behavior of individual members in the non-membership group, as compared with individual members within the membership group.

The pattern of inter-group working relations will be established early on and will endure from the earliest inter-group meetings. Based on the theoretical framework of social identity theory (Tajfel and Turner 1986), more social distance will be given to out-groups and less to in-groups; that is, the amount and character of inter-group communications will be more stable over time and relatively task-oriented. The psychological state of belonging to a group confers a social identity upon group members. This collective sense of social identity will result in a characteristic mode of inter-group communications, relatively early in the group process. Thus,

H1: *Inter-group communication quality is a stable phenomenon and will not change significantly between stages of the joint-group problem-solving process.*

In the context of the present study, inter-group interaction differs from intra-group interaction in that (a) only the *specifics* of the inter-group assignment must be aligned and (b) the integrated group level assignments require precise coordination between groups to meet mutual objectives as scheduled. Thus,

H2: *Inter-group communication quality is independent of intra-group process components, regardless of the stage of development of the joint-group problem-solving process.*

Theoretical propositions about the consequences of inter-group communications are grounded in functional theory (Gouran and Hayakawa 1996). Functional theory addresses how inter-group communication affects both groups' performance and satisfaction. The consequences of inter-group communication for group functioning depends upon success or failure in: (1) understanding the *specific* problem, (2) establishing acceptable choice criteria for solutions, (3) proliferating problem-solving alternatives, (4) assessing the benefits that will ensue from adopting alternatives, and (5) assessing the downside that exists with respect to adopting alternatives (Gouran and Hayakawa 1996). Thus,

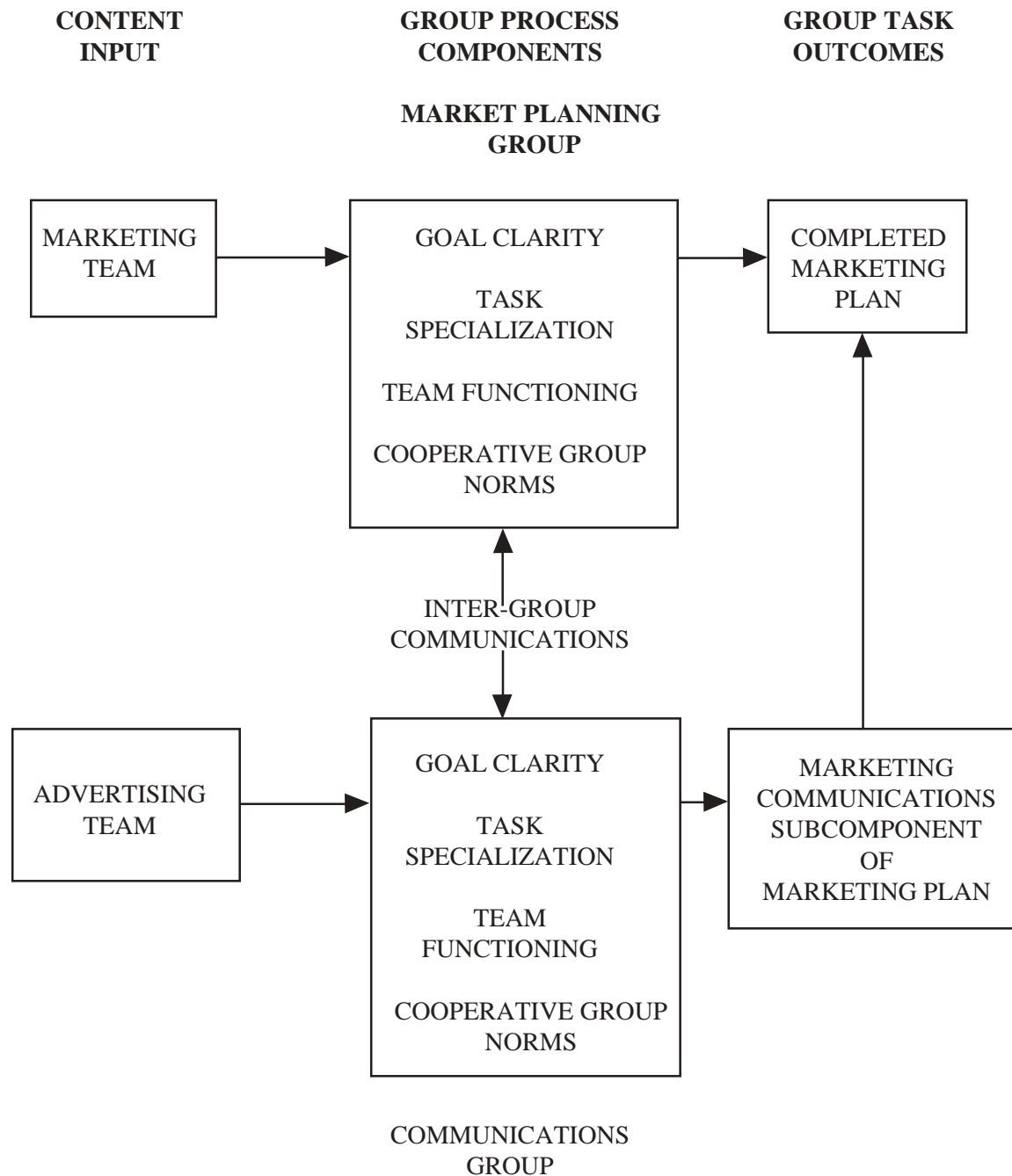
H3: Inter-group communication quality exerts significant effects on group outcomes. Outcomes include how well a task was completed and satisfaction levels.

THE INTEGRATED GROUP PROBLEM SOLVING PROJECT

It is a common practice in industry for organizations to out-source certain specialized work. An example in the area of marketing would be the contracting of advertising and promotional services to an outside advertising agency. In this type of relationship a marketing group within an organization will interface with an account group within the advertising agency to develop and execute a marketing campaign. The objective of the Integrated Group Problem Solving Project under study was to simulate this relationship between an organization and its agency.

To study the effectiveness of this type of group-to-group interaction on both processes and outcomes a semester long experiential learning exercise was created by integrating courses from the Department of Marketing, School of

**FIGURE 1
THE CONCEPTUAL MODEL OF INTRA- AND
INTER-GROUP PROBLEM-SOLVING**



Source: Adapted from: Cummings and Worley (2001), *Organization Development and Change*. Southwestern College Publishing.

Business, and the Department of Communications, School of Arts and Sciences. Two separate courses, Product and Market Planning, and Communication and Product Information, were scheduled concurrently to meet one day a week for three hours. Between the two courses 32 students were enrolled. These students were then assigned to teams of approximately three students each. Each course ended-up with five teams; each of the teams was then paired with a team from the other course. Thus, in total five pairs of teams worked on five separate projects.

Beginning with the fourth week of the course, each class session was divided into two components: (1) Lecture and discussion on subject materials, and (2) Application of theory. For the former, classes met separately, and for the latter classes were merged into “one” class to work as respective organization/agency planning groups in completing a marketing plan that included a comprehensive promotion plan (one of the classrooms was amply large enough to accommodate all 32 students). At the end of the semester, the paired teams had to produce one report containing both the market analysis/plan and detailed promotion plan. In addition, they had to make an oral presentation, where all members were required to speak (although not equally). Both instructors graded the report and the presentation by using a previously agreed upon grading scheme that covered content, organization and professionalism. Students’ course grades were then determined by the average of the two instructors’ grades for the semester-long project, which were significantly correlated ($r > .90$).

METHOD

Data collection for this study was by means of a self-administered questionnaire (see Appendix A for measurement scales employed that assessed intra-group processes). The questionnaire was administered to individual group members at two different points within the semester (week 8 and week 14). The two-wave design enabled us to analyze changes in perceptions on the part of group members as the project pro-

gressed. Questionnaires were administered under the supervision of the faculty member responsible for the course.

The questionnaire had four sections, the first three of which consisted of a series of Likert scales. Scales in section I asked respondents to give their impressions and experiences in connection with *their own group in their own class* (i.e., the students were registered in either the Marketing or the Communications course). Section II asked respondents to give their reactions to *what it was like working with the group from the other class* (Marketing or Communications). The items in this section comprised the QUIC scale: it gauged reports on the quality of inter-group communication. The scale consisted of 13 items and is shown in Figure 2. Section III assessed student satisfaction by asking respondents whether the group experience was enjoyable, interesting, and worthwhile. Section IV asked respondents for classification information related to gender, age, major, class, and group experience.

Changes occurring in group processes were tested by paired sample t-tests. In another analysis, intra-group process components were correlated with the QUIC scale (Pearson’s r) for each of the two waves. Finally, each of the within and between group process measures was used to predict performance in the course and student satisfaction. This entailed use of ordinary least squares bivariate regressions and standardized coefficients.

RESULTS

Group processes were measured at Wave 1 (week 8) and at Wave 2 (week 14). No significant difference between waves was observed for the quality of inter-group communications (see Table 1). H1 is therefore supported: inter-group communication quality is formed quickly and is a relatively stable phenomenon that does not change significantly between stages of the group problem-solving process.

FIGURE 2
QUIC SCALE ITEMS FOR “QUALITY OF INTER-GROUP COMMUNICATIONS”

(7-Point Likert Scales Where 1 = “Strongly Disagree” and 7 = “Strongly Agree”)

- ◆ The amount of communication we have with the other group is very good.
- ◆ The quality of communication we have with the other group is very good.
- ◆ There have not been any major misunderstandings when talking with the other group.
- ◆ The other group provides relevant and helpful information.
- ◆ Our group and the other group always “pulled together.”
- ◆ Any criticisms between the two groups are cordial and helpful.
- ◆ We resolve conflicts with the other group cordially.
- ◆ I liked working with the other group.
- ◆ Working with the other class is been a great experience.
- ◆ Our group and their group work equally hard on this project.
- ◆ The other group deserves the same final grade on the project as we do.
- ◆ There is no confusion between the groups about what functions each group is to perform.
- ◆ We can totally count on the other group to complete their work.

Subjects were provided the following instructions (bold print and emphasis in original): **I would now like to get your reactions to what it was like working with the group from the other class. Again, your responses will be confidential, so please be honest.**

The reliability of this measure based upon the coefficient alpha was .970 for Wave 1 and .974 for Wave 2, both of which far exceed Nunnally’s (1967) arbitrary .70 cut-off.

Of the four intra-group processes, only one – team functioning – showed a significant improvement over time. This finding is consistent with the literature on group phases that include team formation, conflict resolution, and productivity (Tubbs and Moss 1978). Goal clarity, task specialization and group norms were stable across Waves.

The correlation of the inter-group communications scale with each of the intra-group process components was examined. This was done separately for Wave 1 and Wave 2. No significant correlations were observed for Wave 1, and three of the four correlations were not significant at Wave 2 (see Table 2). The only significant correlation observed was between inter-group communication quality and task specialization at

Wave 2. Thus, in the main H2 is supported: inter-group communication is independent of individual intra-group process components, regardless of the stage of development of the joint-group problem-solving process. An explanation for the significant relationship that was found between inter-group communication and task specialization is that better inter-group communication leads to a clearer, more comprehensive understanding of group task requirements. This, in turn, enables the rational allocation of each group’s members to the specialized tasks involved.

Course outcomes, i.e., the averaged instructor ratings for the completed project and students’ overall satisfaction with the course, were predicted by the QUIC scale measures from both

TABLE 1
COMPARISON OF GROUP PROCESS SCORES: WAVE I TO WAVE II

(Paired Samples, N = 32, Standard Deviations in Parentheses)

	Wave I Mean	Wave II Mean	Significance
QUIC scale	3.89 (1.65)	3.56 (1.65)	.090
Goal Clarity	2.61 (1.22)	2.55 (1.26)	.848
Task Specialization	2.87 (1.66)	2.90 (1.51)	.910
Team Functioning**	5.32 (1.10)	4.88 (1.19)	.033*
Group Norms	2.28 (1.03)	2.29 (1.22)	.982

* = Significant at $p < .05$

** Reverse scale: lower scores signify better team functioning.

TABLE 2
CORRELATION OF SCORES FOR *QUIC* INTER-GROUP COMMUNICATIONS
SCALE AND INTRA-GROUP PROCESS COMPONENTS
(N = 32, Significance in Parentheses)

	Wave I Correlation	Wave II Correlation
Goal Clarity	-.142 (.440)	.233 (.200)
Task Specialization	.214 (.239)	.411 (.019)
Team Functioning	(.207)	(.056)
Group Norms	.171 (.350)	.017 (.928)

* = Significant at $p < .05$

Wave 1 and Wave 2 (see Tables 3a and 3b). Inter-group communication quality, but not intra-group processes, drives both project performance (hence course grade) and student satisfaction with the course. Consequently, H3 is supported.

Interestingly, none of the intra-group process measures significantly predicted either outcome measure, except for goal clarity on satisfaction with the course (for Wave 2 only). This latter finding may be interpreted, as follows:

students who come to better understand the specifics of their group assignment are satisfied, while others who do not are frustrated.

CONCLUSION

This study of inter-group communication between cross-disciplinary teams revealed new and important findings. In this conjunctive cross-disciplinary team project, inter-group communication was the most salient factor affecting per-

<p align="center">TABLE 3A EFFECT OF INTRA/INTER-GROUP PROCESS MEASURES ON PROJECT PERFORMANCE (COURSE GRADE) <i>(N = 32, Bivariate Regression)</i></p>			
	Standardized Beta	t-statistic	Significance
WAVE 1			
QUIC scale	.508	3.232	.003*
Goal Clarity	-.083	-.454	.653
Task Specialization	.104	.575	.570
Team Functioning	-.080	-.441	.663
Group Norms	.228	1.281	.210
WAVE 2			
QUIC scale	.405	2.426	.021**
Goal Clarity	.120	.662	.513
Task Specialization	.050	.275	.785
Team Functioning	.286	1.637	.112
Group Norms	-.045	-.245	.808
<p>* = significant at $p < .01$ ** = significant at $p < .05$ Note: Project performance ratings (1 to 100 scale), hence course grade, were the average score from both instructors. The instructors' scores were significantly correlated at $p < .001$.</p>			

TABLE 3B
EFFECT OF INTRA/INTER-GROUP PROCESS MEASURES ON
STUDENTS' SATISFACTION WITH THE COURSE
(N = 32, Bivariate Regression)

	Standardized Beta	t-statistic	Significance
WAVE 1			
QUIC scale	.367	2.158	.039**
Goal Clarity	.245	1.387	.176
Task Specialization	.095	.525	.603
Team Functioning	-.205	-1.146	.261
Group Norms	.267	1.519	.139
WAVE 2			
QUIC scale	.403	2.410	.022**
Goal Clarity	.614	.263	.000*
Task Specialization	.216	1.211	.236
Team Functioning	-.122	-.674	.505
Group Norms	-.058	-.318	.753
* = significant at $p < .01$ ** = significant at $p < .05$			

formance and satisfaction outcomes. Perceptions of inter-group communication quality were stable during the project. Further, inter-group communication quality was found to be largely independent of intra-group process components, including goal clarity, task specialization, team functioning and group norms.

Course Re-Design Strategies

Strategies that may prove useful for improving course outcomes (such as performance and satisfaction) relate to: (1) inter-group formation, i.e., mutuality of concern between teams, favorable interpersonal attraction across teams, and

favorable group attraction; (2) inter-group relationships, i.e., reducing perceived differences in group status and power, and increasing trust between groups; (3) preparation for inter-group meetings, i.e., allowing time to plan, discuss answer/questions, and use electronic or library resources; (4) conflict management in inter-group relations, i.e., ensuring cooperative conflict management, reduction of “groupthink” (reaching premature closure on group agreement), and building consensus; (5) leadership in inter-group relations, i.e., selection of effective leaders, ensuring task leadership, and ensuring process leadership; and, (6) ways to enhance the effectiveness

of inter-group meetings by providing structure and leadership, successfully managing interaction, and optimizing participation. How can these be achieved? Recommendations are advanced below with the proviso that they would be time intensive to implement, hence at best one or two of the suggestions could be undertaken in a semester.

1. *Inter-group formation.* The chemistry between groups working together on a term-long project is critical to successful outcomes. One approach to improve group harmony would be to require the “ad agency” groups to pitch their skills/services to selected marketing groups. This would empower both groups to take part in the selection process, improving the fit between groups. It would also further simulate the real world. In this study, a group from one class was assigned to work with a group from another class.
2. *Inter-group relationships.* Relationships should be based on a mutual understanding of the nature of client-agency relationships. This might derive, in part, from assigned readings on the subject. Another useful tool would be the framing of a detailed, mutually constructed contract that articulates the expectations and responsibilities of both parties.
3. *Preparing for inter-group meetings.* Meetings between teams should be effective and productive. An agenda should be created in advance of each meeting. Time should be allocated for each team to prepare individually for the inter-group meeting. In this pre-meeting, discussion questions should be prepared as well. Between-meeting communications should be facilitated by e-mail, telephone, and even informal attendance at group meetings by members from the other team.
4. *Conflict management in inter-group relations.* A group dynamics workshop for the two classes should be conducted early in the

semester. Such a workshop would address issues of conflict management and consensus building.

5. *Leadership in inter-group relations.* Formal occupational roles should be assigned to leaders who are selected by each group’s members. The agency leader might be designated “Senior Account Executive” and the client leader might be designated as “VP, Brand Manager.” Other project participants should be required to write-down their functions and responsibilities. These job descriptions can be made available to all groups. Groups should develop formal criteria for selection of their own leaders, which could, as an incentive, receive an automatic (grade) bonus.
6. *Conducting inter-group meetings.* A workshop for students in both classes should be held on this important topic. The workshop would include attention to managing interactions in meetings, time management, elicitation of participation, and clarification of agreed-to responsibilities and schedules. The importance of having an agenda and keeping minutes should be stressed.

Future Research

The present exploratory research investigated two outcomes: course grades (solely dependent on the quality of the project) and student satisfaction with the term project. Replicating this effort would be worthwhile. Other key outcomes not measured in this research might be investigated in the future. Examples include inter-group team cohesion and team commitment.

The role of personal characteristics and traits in inter-group communications was not explored. Students vary in their attitudes toward group versus individual assignments, and on traits like introversion and extroversion. The role of such factors appears critical for comprehensive understanding inter-group phenomena, and therefore merits attention.

Finally, from the pedagogical perspective, future research might involve experimentation with teacher interventions and their effects on inter-group communication. For example, teach-

ers may be used in the role of organizational consultants to improve inter-group processes, conflict resolution and team building.

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APPENDIX A

SCALE ITEMS FOR INTRA-GROUP PROCESS COMPONENTS*

Goal Clarity

- ◆ The group was clearly informed as to what their goals were.
- ◆ Our understanding of group goals helped in deciding the roles of the group members.
- ◆ Our understanding of group goals prompted the group to work together as a team.
- ◆ Our understanding of group goals led us to care about the quality and quantity of the group's output.

Task Specialization

- ◆ Each **group** member participated equally in preparing the final report.
- ◆ Each **group** member participated equally in the conceptual development of the project.
- ◆ Each **group** member participated equally in the analysis of the **problems** involved.
- ◆ Each **group** member participated equally in the successful completion of the project.
- ◆ **Group** projects demand equal work from all **group** members.

- ◆ Each *group* member participated equally in data gathering.
- ◆ Each *group* member participated equally in final report writing.
- ◆ Each *group* member participated equally in each part of the project.

Team Functioning

- ◆ It was very difficult coordinating time schedules.
- ◆ Members were often unprepared for *group* meetings.
- ◆ Members wasted time during *group* meetings.
- ◆ Members missed *group* meetings.
- ◆ Some members did not do acceptable quality work.
- ◆ There was lack of excitement/motivation by some members.
- ◆ There was procrastination by *group* members.
- ◆ Members were late to *group* meetings.
- ◆ There were personality conflicts between *group* members.
- ◆ There was lack of understanding what was going on due to excessive class absences by members.
- ◆ We lacked *group* leadership.
- ◆ There were premature ideas/solutions from the *group*.

Group Cooperative Norms

- ◆ Group members believe it is important to maintain harmony within the group.
- ◆ Collaboration is expected among group members and tasks are individually assigned.
- ◆ High levels of cooperation are expected of group members.
- ◆ Members are expected to be willing to sacrifice their own interests for the benefit of the group.
- ◆ A high level of sharing among group members is expected.

***Sources:**

Goal Clarity (Van der Post and de Coning 1997).

Task Specialization (McCorkle et al. 1999).

Team Functioning (McCorkle et al. 1999).

Group Cooperative Norms (Chatman and Flynn 2001).

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