

**MEASURING JAPANESE UNIVERSITY STUDENTS' READINESS FOR  
SECOND-LANGUAGE GROUP WORK AND ITS RELATION TO  
WILLINGNESS TO COMMUNICATE**

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in Partial Fulfillment  
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DOCTOR OF EDUCATION

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by  
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## ABSTRACT

Measuring Japanese University Students' Readiness for Second-Language Group Work  
and Its Relation to Willingness to Communicate

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This study was an investigation of students' *Readiness for L2 Group Work* and its relationship to *Willingness to Communicate in L2 Group Work* in a Japanese university. *Readiness for L2 Group Work* is defined as learners' self-perception of the degree to which they are prepared cognitively and affectively for L2 group work. It consists of *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*.

Two versions of the same questionnaire were administered to approximately 750 students with two English proficiency levels in the Communication and the Language and Culture courses at the beginning and end of the 2005 spring semester. A factor analysis identified six factors: *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Confidence in L2 Group Work*, *Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, *Beliefs of Group Work Usefulness*, and *Willingness to Communicate in L2 Group Work*.

First, the descriptive statistics and the  $2 \times 2$  ANOVA results for both questionnaires showed that the Communication course students had significantly higher *Readiness for*

*L2 Group Work* than the Language and Culture students. However, there was also a statistically significant Level and Course interaction, which was caused by the lower proficiency Communication course students who displayed higher *Readiness for L2 Group Work* than their higher proficiency counterparts, and the higher proficiency Language and Culture students who showed higher *Readiness for L2 Group Work* than their lower proficiency counterparts. Second, the mixed between-within-subjects ANOVA results showed that the participants had significantly higher *Readiness for L2 Group Work* at the end than at the beginning of the course. The Level and Course interaction was statistically significant for the same reason as mentioned above. Finally, structural equation modeling showed that *Willingness to Communicate in L2 Group Work* was influenced by *Beliefs about L2 Group Work* via *Communication Confidence in L2 Group Work*.

This study contributes a new concept, *Readiness for L2 Group Work*, to the group work literature. Further, the structural model specifies the relationship between *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*.

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# **CHAPTER 1**

## **INTRODUCTION**

Cooperative learning (CL) has been extensively researched in various parts of the world, in particular, in the U.S. and Israel, as an innovative teaching method. CL has been found to be beneficial for improving students' academic achievement, promoting interpersonal skills, and enhancing psychological health (e.g., Jacobs, Power, & Loh, 2002; Johnson & Johnson, 1999a; Johnson, Johnson, & Holubec, 1998, 2002). In particular, CL's power to enhance academic achievement is well recognized. Johnson, Johnson, and Stanne (2000) conducted a meta-analysis of the effectiveness of major CL methods and found that all of them were more effective in bringing about academic gains than individualistic or competitive learning. CL has also been advocated as an antidote to some of the problems that are found in traditional classrooms where race, status, and academic ability differences have not been dealt with adequately. CL advocates believe that CL can help address serious social problems that occur in educational contexts (Cohen, 1994; Cohen, Lotan, Whitcomb, Balderrama, Cossey, & Swanson, 1999). Recently, CL has attracted the attention of university professors as a way to empower students and help them to become more autonomous learners.

## The Background of the Issue

I first encountered cooperative learning in the edited book, *Cooperative Learning* (Kluge, McGuire, Johnson, & Johnson, Eds., 1999) published by The Japan Association for Language Teaching (JALT) shortly after its publication. I was so inspired by the book and saw such great potential in CL for helping students to become self-directed learners that I hoped that I could use CL in my English lessons someday. I believed that this was important because after finishing their schooling, they would not have teachers to help them any more, and learning together with other students in CL groups would be the first step to becoming more independent.

When I started teaching at a university in 2001, I began using CL on a trial and error basis as a novice CL practitioner. The only resource that I could rely on was the JALT book that I had read, as there was nobody that I could share and exchange information with concerning CL. During this period, I noticed that students varied in their attitudes toward group work. Some students were willing to participate in group work, while others resisted working with peers or did not seem to know how to participate in group work effectively.

In the CL literature, heterogeneous grouping (e.g., mixing students with different achievement levels, ethnicities, gender, or personalities) is recommended by many CL advocates for various reasons (e.g., Cohen, 1994; Jacobs et al., 2002). For example, it is suggested that heterogeneous groups are likely to result in students gaining wider perspectives, making greater academic gains, and reducing status differences. However,

at that time I did not pay a great deal of attention to group formation, so by chance, some groups were heterogeneous on a range of variables while others were homogeneous on those same variables. However, regardless of the composition of the groups, the overall reaction of the students to the group work was not as positive as I had expected.

When I moved to another university, I had the opportunity to use CL more extensively. At this university, the students were streamed based on a placement test; therefore, in each class, the students were relatively homogeneous in terms of their English proficiency. Besides that information, however, I initially knew little about the students. As the class proceeded, I gained more information about the students, but it was almost impossible to use the newly gained information to form heterogeneous groups in a class with nearly 40 students within one academic semester. While the CL literature strongly recommended heterogeneous grouping, I knew of no way to form heterogeneous groups except by mixing male and female students.

How could I form heterogeneous groups in classes that were homogeneous in so many respects? Were there useful criteria that I could use to make heterogeneous groups? I came up with the idea of using a questionnaire designed to measure students' beliefs about group work. I hypothesized that if the students were positive about group work, they would participate in groups more actively. On the other hand, if they had negative views concerning group work, they would be more reluctant to work in groups. Another hypothesis was that if students who were more positive about group work would exert positive rather than negative influences, then those who did not work as effectively in

group work would benefit from working closely together with more positive students.

This was the origin of this study.

As I continued studying CL and learner psychology, I began to think that not only students' perceptions (beliefs) about group work, but also their communication apprehension in L2 group work and self-perceived communicative competence in L2 group work would also affect their willingness to communicate when engaging in group work tasks. As a result, I started using the term "readiness for L2 group work" to represent three concepts: communication apprehension in L2 group work, self-perceived communicative competence in L2 group work, and beliefs about L2 group work. I believed that readiness was not a stable construct and that students could become more ready as they experienced L2 group work.

Based on the above ideas, I developed a questionnaire, administered it, and modified it. I repeated this cycle several times, believing that if I could produce a questionnaire that could reliably and accurately measure students' readiness for L2 group work, then not only I, but also other English teachers, could benefit when forming small groups. Readiness for group work could be a basis for forming heterogeneous groups, and the resulting groups would likely function better than groups formed without benefit of the knowledge gained via this questionnaire. This questionnaire could also allow teachers to tailor their instruction so that it matched students' readiness for L2 group work. For example, if a class were found to consist of students with a relatively low degree of readiness, teachers might wish to focus on developing more basic CL skills



(e.g., attentive listening, helping behaviors, and fulfillment of their responsibilities) by using simple CL tasks. On the other hand, if a class were found to be made up of students with a relatively high degree of readiness, teachers could focus on encouraging the students to exert greater autonomy.

### Statement of the Problems

Although CL has been extensively studied by many researchers, research in the second language learning field is sparse. In addition, although studies conducted to date have mainly been focused on the effectiveness of CL, students' perceptions about CL have rarely been investigated comprehensively. In particular, the concept of *Readiness for L2 Group Work* is new, and therefore has not been investigated yet. As a result, it is unlikely that teachers can know how ready their students are for L2 group work (including CL group work). Furthermore, it is currently difficult to determine to what degree students in different courses and with different levels of English proficiency differ in their readiness for group work and how their readiness changes as they experience English instruction at college. Finally, how the components of *Readiness for L2 Group Work* are related to one another or to *Willingness to Communicate in L2 Group Work* has not, to my knowledge, been investigated.

## The Purposes of the Study

The primary purpose of this study is to investigate Japanese college students' *Readiness for L2 Group Work*. In particular, I will focus on differences in the readiness of four groups of students (higher proficiency and lower proficiency students studying in a Communication course and Language and Culture course), changes in their readiness over one academic semester, and the relationships among the components of *Readiness for L2 Group Work*.

Another important purpose of this study is to develop an instrument that can accurately measure students' *Readiness for L2 Group Work*. Because *Readiness for L2 Group Work* is a new concept, no instrument measuring students' *Readiness for L2 Group Work* has been developed previously. Constructing this instrument was necessary to investigate the issues stated above.

A third purpose of this study is to present a structural model testing hypothesized relationships among *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*. In this study, I define *Readiness for L2 Group Work* as an aggregate construct consisting of low communication apprehension, high self-perceived communicative competence, and positive beliefs about group work. A more detailed definition of *Readiness for L2 Group Work* is provided below.

## Important Concepts in This Study

### *Cooperative Learning*

Different CL theorists define cooperative learning differently. However, in this study, I will use the following definition of CL: principles and techniques that involve small groups as an instructional means so that students work together to maximize their own and each other's learning. This is a combination of Johnson and Johnson's (1999a) and Jacobs et al.'s (2002) definitions of CL. Johnson and Johnson's definition expresses the most important elements of CL in relatively simple wording, while Jacobs et al. are correct in stating that CL is not just an instructional method, but a set of principles. However, definitions alone do not inform us adequately about cooperative learning because the most important concepts are often expressed as "principles."

Johnson et al. (2002) proposed five basic principles of CL. The first principle is *positive interdependence*, which is defined as "the perception that you are linked with others in a way so that you cannot succeed unless they do (and vice versa), that is, their work benefits you and your work benefits them" (p. 225). The second principle is *individual accountability*, which is referred to as "the measurement of whether or not each group member has achieved the group's goal" (p. 223). The quality and quantity of each member's contributions are assessed and the results of individual member's contributions are given to all group members. The third principle is *promotive interaction*, which means "actions that assist, help, encourage, and support the achievement of each other's goals" (p. 226). The fourth principle, *social skills*, concerns "the interpersonal and

small group skills needed to interact effectively with other people” (p. 226). The fifth principle, *group processing*, is defined as “reflecting on a group session to (a) describe what member actions were helpful and unhelpful and (b) make decisions about what actions to continue or change” (p. 224). Both Johnson and his associates (Johnson & Johnson, 1999a, 1999b; Johnson et al., 1991, 1998, 2002) and Jacobs et al. (2002) have stated that positive interdependence is the heart of CL.

Johnson et al. (1998) advocated CL as a way of embodying a new paradigm in teaching. They compared CL with competitive and individualistic learning and proposed the following seven principal perspectives that educators should take to enhance CL in the classroom. First, they view knowledge as something that is constructed, discovered, transformed, and extended by students and not given from the knower. Second, they view learning as something that learners do. These two perspectives treat learners as active agents who construct their own knowledge. Third, they believe that learning occurs in social contexts where students interact with the teacher and their classmates. Fourth, they state that a teacher’s role is not transferring knowledge to students, but rather one of developing students’ abilities and talents. Fifth, they think that education should be personalized so that students and teachers can work together because individuals can cooperate to co-construct understandings and knowledge only through personalized interaction. Sixth, they believe that the above five perspectives should occur within a cooperative context. To them, cooperation means “working together to accomplish shared goals” (Johnson et al., 1998, p. 1:13), and a cooperative context is a situation in

which cooperation takes place. Finally, they proposed that teaching is a complex practice that requires considerable teacher training and never-ending efforts by teachers to improve. In short, in order for group work to qualify as highly efficient CL group work, all of the above mentioned CL principles, and particularly positive interdependence and individual accountability must be embodied.

*The Distinction between Cooperative Learning, Competitive Learning,  
and Individualistic Learning*

There are three possible goal structures in educational contexts: competitive, individualistic, and cooperative (Johnson & Johnson, 1999a; Johnson et al., 1998, 2002). In competitive learning, students compete against each other for their own success, such as who finishes a task faster or more accurately. In other words, one student's success means another student's failure. This situation is often seen in Japan when students compete to be accepted by a prestigious college. In teacher-fronted classrooms, students often compete against one another to win the teacher's attention in order to get a chance to show their knowledge in front of the class. When one student is called on, the other students lose a chance to talk.

In individualistic learning (e.g., working on an assigned worksheet alone), students work independently of each other, so one person's outcome does not affect other students' success or failure. This style of learning is also often seen in traditional classrooms when the teacher assigns individual seatwork.

Contrary to competitive and individualistic learning, in cooperative learning, students work together in order to achieve common goals. Group members are positively interdependent so that their own success depends on their group members' success, and their group members' success depends on their own success. In the process of achieving the common goal, each student fulfills his or her responsibility.

Johnson and his associates (Johnson & Johnson, 1999a; Johnson et al., 2002) do not completely rule out the use of competitive learning and individualistic learning, as they have stated that each has its place in an educational curriculum. However, they have emphasized that the most important learning mode is cooperative learning and that the majority of the class time should be spent in cooperative activities. I agree with them and strongly believe that competitive learning and individualistic learning should occur under the umbrella of cooperation because cooperative learning is concerned with not only academic success but also students' personal growth.

*The Distinction between Cooperative Learning Group Work  
and Traditional Group Work*

Group work has been increasingly used in college English classrooms in Japan because of the communicative language teaching movement (Matsuura, Chiba, & Hilderbrandt, 2001). However, cooperative learning, which seems similar to traditional group work in the sense that both approaches use groups as a means of instruction, is not a common teaching practice in Japanese universities.

In fact, many teachers confuse CL group work with traditional group work. Simply put, CL group work is structured in various ways to encourage students to share common goals (goal structure) and help each other to enhance their own learning as well as that of their groupmates' and/or classmates' (positive interdependence). However, in traditional group work, positive interdependence and individual accountability are not clearly employed; thus, students often simply sit together and are less likely to have clear common goals or feel empathy for those who are less skillful. Problems with “free riders” also often occur, causing resentment among members who do most of the work. Therefore, in this study I will clearly distinguish *traditional group work* and *CL group work* based on the above criteria.

Traditional group work can be regarded as CL group work if it meets the CL criteria listed above; however, just having students work in groups does not guarantee that their group work is CL group work. If students in a group do not understand the importance of cooperation and interact accordingly, their interaction may not be promotive of learning (Johnson & Johnson, 1999a). For instance, students may be negatively interdependent when one person's failure results in another person's success, or, they may be non-interdependent (i.e., individualistic) when one person's actions do not affect another person's success or failure. In other words, CL group work is advocated in order to solve the problems that traditional group work often exhibits.

Having said that, I am aware that it is unrealistic to expect students to distinguish CL group work from traditional group work. Moreover, I believe that CL group work is

an improved form of traditional group work. Therefore, if students are ready for CL group work, they are naturally ready for traditional group work. In addition, traditional group work and CL group work are similar in that students work in groups in both cases. For these reasons, in this study, I will use the expression, *group work*, rather than *CL group work*. Group work is the general concept that includes CL group work; however, when it is necessary to clearly distinguish CL group work from other forms of group work, I will use the expression, *CL group work*.

### *Readiness for L2 Group Work*

*Readiness for L2 Group Work* is a new concept and has not been used by CL researchers to date. I define this concept as learners' self-perception of the degree to which they are prepared cognitively and affectively for L2 group work. Its components are *Communication Confidence in L2 Group Work*, which consists of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work* (cf., MacIntyre, Clément, Dörnyei, & Noels, 1998), and *Beliefs about L2 Group Work*. Note that this is a working definition; other factors may be identified and added as research in this area advances. In my view, if a student has a lower communication apprehension in L2 group work, higher self-perceived communicative competence in L2 group work, and stronger positive beliefs about group work, the student is more ready for L2 group work. Students who are more ready for L2 group work are more likely to participate in group work effectively and comfortably. Colbeck,



Campbell, and Bjorklund (2000) pointed out that students come to university with different group work experiences in and outside the classroom. Therefore, I assume that every student is at a different stage of *Readiness for L2 Group Work* and students' readiness can change as they encounter different life experiences and group work experiences.

In the SLA literature, beliefs about SLA are defined differently depending on what perspective the researchers take. Barcelos (2006) focused on the contextual nature of beliefs and suggested that they were not only a cognitive concept, but also social constructs formed in social contexts in which learners accumulate experiences and encounter problems. She borrowed Dewey's definition and defined beliefs as "a form of thought that covers all the matters of which we have no sure knowledge and yet which we are sufficiently confident of to act upon and also the matters that we now accept as certainly true, as knowledge, but which nevertheless may be questioned in the future" (Dewey, 1933, p. 6. cited in Barcelos, 2006, p. 10). In this study, I will apply her definition to beliefs about L2 group work by proposing that students' beliefs about L2 group work are formed based on their experiences in social contexts, including language learning situations. Their beliefs are relatively stable, but changeable (Sakui & Gaies, 1999; Woods, 2006). Beliefs also influence students' L2 learning behaviors (Horwitz, 1985, 1987, 1988; Woods, 2006). Therefore, I consider these beliefs to be an important component of *Readiness for L2 Group Work*.

According to MacIntyre et al. (1998), communication confidence is made up of communication apprehension and perceived communicative competence in L2. I adapted their idea and view communication confidence in L2 group work as being made up of communication apprehension in L2 group work and self-perceived communicative competence in L2 group work. MacIntyre, Noels, and Clément (1997) reported that self-perceived competence was significantly correlated with anxiety and actual competence in French as a second language at a Canadian university. Although MacIntyre et al. (1997) admitted that self-perceived competence was not exactly the same as actual competence, less anxious students who perceived themselves as more competent chose to communicate more willingly. Therefore, I believe that if students have low communication apprehension and view their communicative competence as being high (i.e., high communication confidence in L2 group work), they will be more likely to participate in L2 group work. Moreover, both communication apprehension in L2 group work and self-perceived communicative competence in L2 group work can change as students experience L2 group work. If students become more confident in L2 group work, their increased confidence will make them more ready to engage in L2 group work.

### Significance of the Study

This study contributes a new concept, *Readiness for L2 Group Work*, to the scholarly literature on the use of peer interaction in second language instruction.

*Readiness for L2 Group Work* consists of students' beliefs about L2 group work and communication confidence in L2 group work. This study will also specify the relationships among the components of *Readiness for L2 Group Work* and willingness to communicate. The structural model that I will present and test will open up discussions on the relationships among components of *Readiness for L2 Group Work* and willingness to communicate in L2. I believe that this study will pave the way for a new understanding of students' perceptions of L2 group work and contribute to the further development of this concept.

The questionnaire used in this study will provide teachers with another means to form heterogeneous groups in their English classes by allowing them to know the degree to which students vary in their *Readiness for L2 Group Work*. This will allow them to tailor their English instruction so that it better matches students' *Readiness for L2 Group Work*. I believe that groups formed in this manner will be more efficient and effective.

Furthermore, this study may positively influence educational policy by showing positive changes in students' readiness for group work. Currently, competitive and individualistic learning are prevalent in English education in Japan. However, if students are shown to become more ready for group work by engaging in group work, cooperative learning, rather than competitive and individualistic learning, may be employed more widely in schools and may influence Japanese educational policy.

## Delimitations

There are some delimitations to this study. First, the participants in this study were first year students at a private Japanese college in the Tokyo area majoring in liberal arts, tourism, and welfare. Because of these restrictions in the participants' majors, ages, first language (Japanese), and nationality (Japanese), the results should be generalized cautiously to students who belong to a different population.

Second, in this study, group work was broadly defined because it was impossible to know what type of group work (CL or non-CL) was employed in the classrooms. Therefore, it is unknown if the same result would be obtained if students had experienced CL group work.

## The Structure of This Study

Although the data collected in this study are about L2 group work generally, not about cooperative learning, cooperative learning is discussed in much of the Literature Review, as well as other sections of this study. Cooperative learning can be viewed as a subset of group work. What distinguishes this subset is that based on theory, research, and practical experience, educators working from a cooperative learning perspective seek to guide group work so that student-student interaction is more likely to achieve its potential. When peer interaction is used in L2 instruction, a new set of factors is introduced. The cooperative learning literature provides insight into these factors. By

drawing on this literature, I hope to shed additional light on the research questions addressed in this study.

Chapter 2 is a review of the relevant literature that serves as the basis of this study. Seven areas are reviewed: the literature on: (a) the theoretical underpinnings of cooperative learning, (b) definitions and principles of cooperative learning, (c) cooperative learning in the Japanese context, (d) the effectiveness of cooperative learning, (e) interaction among students in small groups, (f) students' perception of group work, and (g) affective factors in learning an L2. Chapter 3 reviews the problems and limitations of research on cooperative learning that motivated this study, and provides a list of the issues addressed by this study and the specific research questions that will be investigated. In Chapter 4, Methods, the participants, instrumentation, and procedures are described. In Chapter 5, the preliminary analyses are presented, and the results of the study are shown in Chapter 6. Chapter 7 is a discussion of the main results. In Chapter 8, the conclusion, the limitations of this study, suggestions for future research, and the pedagogical implications of the study are presented.

**CHAPTER 2**  
**LITERATURE REVIEW OF SMALL GROUP LEARNING**  
**AND AFFECTIVE FACTORS**

In this chapter, I will review literature concerning small group learning and affective factors. As mentioned above, this study concerns L2 group work and not CL. However, the study is strongly supported by the principles derived from cooperative learning. Besides, CL is a more sophisticated form of small group work that is designed to make group work as learning-rich as possible. Therefore, the review of the literature is strongly focused on cooperative learning.

Theoretical Underpinnings of Cooperative Learning

In this section, the educational and psychological theories that underpin cooperative learning will be reviewed and this will be followed by a discussion of L2 motivational perspectives that support use of CL in L2 instruction.

*Educational and Psychological Theories that Underpin Cooperative Learning*

Cooperative Learning (CL) is more than a mere teaching technique unsupported by a theory. Rather, it is rooted in psychological theories and educational philosophy from the field of general education (Jacobs, McCafferty, & DaSilva Iddings, 2006). Social interdependence theory (e.g., Johnson & Johnson, 1999a, 2003), sociocultural theory

(e.g., Vygotsky, 1978), situated cognition theory (Lave & Wenger, 1991), cognitive psychology (e.g., Craik & Lockhart, 1972), motivational theories in psychology (e.g., Dörnyei, 2001a, 2001b), and humanist psychology (e.g., Erikson, 1963; Maslow, 1968, 1970; Rogers, 1969, all cited in Williams & Burden, 1997) are some of the main theoretical underpinnings of CL.

The first theory underlying CL is social interdependence theory (Johnson & Johnson, 1999a), which was developed by David Johnson and Roger Johnson. They incorporated the idea of group dynamics from Kurt Lewin and the types of interdependence (positive/negative interdependence) identified by Morton Deutsch. According to Johnson and Johnson (2005, 2007), social interdependence exists when people work together to achieve a common goal and each member's actions affect others' outcomes. Social interdependence theory posits that the way that individuals interact is determined by how social interdependence is structured and their interaction determines the outcomes (Johnson & Johnson, 1999a). Positive interdependence is thought to produce positive interpersonal relationships and psychological health by promoting interaction among the members of a social group (Johnson et al., 2002).

A second theory that supports the use of CL is sociocultural theory, which is rooted in Vygotsky's developmental theory. According to this theory (e.g., Lantolf, 1994, 2000), learning first occurs through human interaction (on the social plane), after that, with the help of tools (including language) and human mediation, it is eventually internalized. That is, mediators and language play important roles in this process. In relation to

mediation, it is hypothesized that learning occurs in learners' zones of proximal development, which involve tasks that learners cannot accomplish individually, but that they can accomplish with the help (scaffolding) of adults or more capable peers. Donato (1994) even stated that collective scaffolding occurs when learners of equal academic level work together. Furthermore, because learning occurs in cultural and historical contexts, the influence of the larger context should not be overlooked. CL groups can offer learners the possibility of a great deal of peer mediation, and students can provide scaffolds for each other.

Third, a theory that is closely related to sociocultural theory, situated cognition theory, also emphasizes the influence of social context on learners and learners' participation in a community of practice (Lave & Wenger, 1991). I believe that this perspective strengthens the theoretical foundations of CL. Novices start as legitimate peripheral participants, who are allowed to observe how the more experienced participants behave while engaged in minor tasks. The newcomers gradually assume fuller participation. In educational settings, Brown, Collins, and Duguid (1989) proposed the idea of cognitive apprenticeship through which learners are brought into a learning community by observing and receiving coaching from more experienced members (usually teachers). At first glance, CL may appear incompatible with situated cognition theory because everybody is initially a newcomer in CL groups (i.e., all of the participants are students). Thus, although CL groups may not necessarily consist of experienced members and newcomers, classrooms can be viewed as communities of



practice (learners) and groups as sub-communities of practice because learners bring unique life experiences and different levels of intelligence to classroom tasks. For instance, some learners are more accustomed to group work (old-timers), while others have seldom worked in groups (newcomers); thus, those with greater experience can provide a positive example to newcomers to some degree.

Fourth, cognitive psychologists provide other reasons why improved learning outcomes can be brought about in CL groups. Sociocognitive conflict theory proposes that when learners perceive a contradiction between their existing understanding and their experience interacting with others, cognitive conflict arises (Piaget, 1932, cited in Webb & Farivar, 1999). In order to resolve this conflict, learners may examine their own ideas and beliefs again, pose questions to themselves, and seek further information in order to reconcile the contradictory ideas. This process is believed to result in cognitive development. In CL group work, students with different viewpoints work together, and thus they have numerous opportunities to experience cognitive conflicts. It is also suggested by cognitive elaboration theory that learners have to engage in some kind of cognitive restructuring or elaboration of the material in order to retain information in memory or to relate the new information to already existing information in memory (Wittrock, 1986). It is also suggested that depth of processing will occur when individuals elaborate on their ideas, and this depth of processing is likely to help them understand and remember the ideas that they are processing ( Craik & Lockhart, 1972). Research shows that in CL groups, peers can be encouraged to provide not just answers

but also explanations (a kind of elaboration). This helps not only the student who is receiving the explanation but also the student who is providing the explanation (Webb, 1985; Webb & Farivar, 1999; Webb & Mastergeorge, 2003). Compared to whole class instruction, students are considered to have more opportunities for cognitive elaboration in CL groups because there are more student-student interactions in small groups than in a teacher-fronted class.

Fifth, motivational theories from the field of psychology also provide theoretical support to CL. First, self-determination theory (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000, 2002) assumes that “all individuals have natural, innate, and constructive tendencies to develop an ever more elaborated and unified sense of self” (Ryan & Deci, 2002, p. 5). In order for healthy development of self to take place, people have to satisfy three basic psychological needs, the need for competence (a feeling of being able to show one’s capability), relatedness (a feeling of belonging and being cared for by others), and autonomy (a feeling that one can freely act from one’s own interest and integrated values), all of which are universal. Based on this assumption, Ryan and Deci (2002) claimed that intrinsic motivation, which originated in pleasure and satisfaction inherent in action, yields more self-determined activities and usually results in more persistence and better outcomes than extrinsic motivation, which is brought about from external environmental factors such as rewards or punishment.

When students work in cooperative learning groups, peer-peer interactions often produce inherent joy, increase elaborated explanations that help both academically strong

and weak students view themselves as more competent, enable students to feel related to others, and allow them to exert autonomy (i.e., free from teacher control). Therefore, cooperative learning groups have the potential to increase students' intrinsic motivation, and thus, produce more persistence in task engagement and better outcomes. Some of cooperative learning methods use rewards, which can be extrinsic motives, but Ryan and Deci (2002) stated that if rewards are given in a non-evaluative context that supports autonomy, they are unlikely to be detrimental.

Similar to self-determination theory, self-efficacy theory (Bandura, 1977) also supports cooperative learning. It postulates that if individuals have a sense of personal efficacy, coping behavior will be initiated, and effort will be made and sustained when they encounter obstacles. Bandura listed four major sources of efficacy information: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. In cooperative learning, students perform and accomplish tasks together, provide models, and learn in a relaxed atmosphere. Helping each other is also strongly encouraged by the teacher. Therefore, these behaviors are likely to enhance students' self-efficacy, which in return may enhance their motivation to learn.

Expectancy-value theory (Wigfield, 1994; Wigfield & Eccles, 2000) also underpins cooperative learning. Expectancy-value theory states that when individuals expect to succeed and value a particular task, they will be motivated to perform it. In cooperative learning, because the value of cooperation is emphasized (e.g., Jacobs, Power, & Loh, 2002) and CL tasks are often structured by providing many steps (e.g., Jacobs et al.,

2002; Kagan, 1994), it is likely that many students can foresee their successful accomplishment of the tasks and consider that working together to accomplish the goal is worthwhile.

Sixth, humanist psychology views each learner as a whole person, who possesses not only cognitive aspects but also affective aspects (Williams & Burden, 1997). Humanist psychologists like as Erik Erikson, Abraham Maslow, and Carl Rogers commonly view safety, empathy, trust, and self-actualization as important for human growth. Williams and Burden (1997) provided a succinct summary of Hamachek's (1977) educational implications. The first implication concerned the importance of personalized learning. The second concerned the necessity of providing help and encouragement for learners to make their own choices in order to self-actualize. The third implication was that the teacher should empathize with learners as individuals. Humanist psychologists also emphasize learner freedom, but they do not forget to point out the importance of responsibility, which acts as a counterbalance to freedom. In many CL approaches, creating safety, constructing an intimate environment, and building trust are key goals. Having empathy toward others is also emphasized, and students are helped to achieve self-actualization by being given autonomy from the teacher (e.g., Cohen, 1994; Jacobs et al., 2002; Johnson & Johnson, 1999a; Kagan, 1994; Sharan & Sharan, 1992).

### *L2 Motivational Perspectives that Support Cooperative Learning*

Dörnyei (2002) proposed a process-oriented approach to motivational studies.

According to him, when motivation is generated in the preactional stage, the generated motivation should be actively maintained and protected in the actional stage in order to accomplish a task, and once the action is finished, learners evaluate how well the task was done in the postactional stage. Dörnyei (1994) suggested that foreign language motivation has three levels: the language level, learner level, and learning situation level. The learning situation level is further divided into course-specific, teacher-specific, and group specific components. Among the group specific motivational components, he listed four elements as important motivational factors: (a) goal-orientedness, (b) norm and reward system, (c) group cohesion, and (d) classroom goal structures. He suggested that in order to elevate motivation, each group should focus on attaining its goal; rewards and punishment should become group norms agreed by the majority of group members; group members should feel connected to each other and to the group itself; and classroom goals should be achieved by cooperative effort. Ehrman and Dörnyei (1998) listed 11 motivational factors: goal-orientedness, cooperation, group cohesiveness, reward system, peer motivation, learner autonomy, intrinsic interest, expectancy of success, gained satisfaction, self-confidence, and reduction of resistance to learning. They stated that CL directly increases individual student learning motivation. Dörnyei (2002) also pointed out the importance of looking at not only individuals' motivation but

also their speech partners' motivation because task motivation is co-constructed by the task participants.

## Cooperative Learning

### *Definitions of Cooperative Learning*

Different cooperative learning theorists define cooperative learning differently. For example, Olsen and Kagan (1992) defined CL as “group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others” (p. 8). Jacobs et al. (2002) gave a much shorter and broader definition: “principles and techniques for helping students work together more effectively” (p. ix). According to Slavin (1995, p. 2), CL is “a variety of teaching methods in which students work in small groups to help one another learn academic content.” Johnson and Johnson (1999a) defined it as “the instructional use of small groups so that students work together to maximize their own and each other’s learning” (p. 5). Each definition reflects the emphasis that each proponent places on the concept of CL, with Olsen and Kagan (1992) having the narrowest view of CL by explicitly writing that “learning is dependent on the socially structured exchange of *information*” (italics added). From my viewpoint, however, learning occurs not just as individuals exchange information; it also occurs when people interact with or scaffold from peers or when they participate in the learning community.

In contrast to Olsen and Kagan, and Jacobs et al. apply CL concepts rather broadly. In this study, my definition of CL is adapted from Johnson and Johnson's (1999a) and Jacobs et al.'s definitions of CL. Johnson and Johnson's definition expresses the most important elements of CL in relatively simple wording, but at the same time I agree with Jacobs et al. when they say that CL is not just an instructional method, but a set of principles. Therefore, I define CL as principles and techniques that employ small groups as an instructional means so that students work together to increase their own and each other's learning as much as possible. This definition omits a great deal of information about cooperative learning because the most important concepts are often expressed as principles.

### *Cooperative Learning Principles*

In the same way that different CL advocates define CL differently, they also propose a variety of different principles as important elements for successful CL group work. Here I would like to focus on ideas proposed by Kagan (1994), Johnson and Johnson (1999a, 1999b), Jacobs et al. (2002), Slavin (1995), and Cohen (1994). Although Sharan and Sharan are influential CL proponents, I did not include them here because they do not propose any specific principles.

Kagan (1994) and Kagan and Kagan (1994) proposed, as one of their six key concepts of CL (teams, cooperative management, will to cooperate, skill to cooperate, basic principles, and structures), four basic principles: equal participation, simultaneous

interaction, positive interdependence, and individual accountability. Kagan asserted that small group work that does not incorporate the above four principles cannot be called cooperative learning (September 2003, at a workshop held in Tokyo). In order to make cooperative group work more successful, Kagan proposed various structures. A structure is a way of organizing the interaction of individual students in a classroom for any kind of subject matter. When combined with a particular content, it becomes an activity. For example, a structure of students taking turns saying their ideas one at a time becomes an activity when students take turns saying what they did last weekend by using the past tense in English. In other words, each lesson consists of various activities that are built on structures and subject matter.

Slavin (1995) emphasized team rewards, individual accountability, and equal opportunities for success as the key concepts for CL in his description of *Student Team Learning*, a CL method developed at Johns Hopkins University. Teams (not individual students) are rewarded if they exceed a designated criterion (team rewards); thus, if all groups do better than the criterion, all the teams are rewarded. Each student can contribute to the team by doing better than their own past performance (equal opportunities for success); therefore, regardless of the students' previous academic achievement, everybody has an equal chance to contribute to team success. In order to contribute to team success, individual team members must do their best to learn the assigned materials in order to exceed their past performance, and peers need to help them to do this. Slavin reviewed a substantial number of studies on cooperative learning and



concluded that a combination of these two factors (team goals and team success) provides an incentive for students to work cooperatively and to maximize their effort. Slavin did not explicitly use the term *positive interdependence* as one of his key concepts, but his ideas of goals and rewards are two ways to embody positive interdependence, which is at the heart of CL.

Similarly, Johnson and Johnson (1999a, 1999b), Johnson, Smith, and Johnson (1991), and Johnson, Johnson, and Holubec (1998, 2002) enumerated five CL principles: positive interdependence, individual accountability, face-to-face promotive interaction, social skills, and group processing. According to them, positive interdependence is defined as “the perception that you are linked with others in a way so that you cannot succeed unless they do (and vice versa), that is, their work benefits you and your work benefits them” (1999a, p. 238). Individual accountability is referred to as “the measurement of whether or not each group member has achieved the group’s goal” (p. 237). The quality and quantity of each member’s contributions are assessed, and the results are given to all group members. Johnson and Johnson also defined face-to-face promotive interaction as “actions that assist, help, encourage, and support the achievement of each other’s goals” (p. 239) and social skills as “the interpersonal and small group skills needed to interact effectively with other people” (p. 239). Finally, they defined group processing as “reflecting on a group session to (a) describe what member actions were helpful and unhelpful and (b) make decisions about what actions to continue

or change” (p. 236). Johnson and Johnson (1999a, 1999b) and Johnson et al. (1991, 1998, 2002) stated that positive interdependence is the heart of CL.

Cohen (1994) also named two key features of CL. The first one is what she described as the delegating authority, that is, giving students the authority to decide how to accomplish tasks while engaged in group work. The second is positive interdependence. Although she did not use this term, when she states that students should cooperate with each other because everybody has something to contribute to achieve the group goal and they need each other, her idea is very close to the notion of positive interdependence used by other CL authorities. In order to promote positive interdependence, she emphasized face-to-face interaction. Cohen, Lotan, Whitcomb, Balderrama, Cossey, and Swanson (1999) also addressed status differences among students and strongly promoted heterogeneous classrooms and multiple-abilities treatment (valuing multiple abilities and making them necessary to accomplish tasks) to deal with them. However, Cohen (1994) was rather cautious about the uniform application of general principles of cooperative learning because no two classes are exactly the same. Instead she encouraged teachers to pay close attention to what is happening in class. She also emphasized the importance of teacher training through which teachers develop their skills and confidence in using CL group work in order to enable students to experience the benefits and joys of working with peers.

Jacobs et al. (2002) synthesized the principles proposed by the above mentioned CL advocates and proposed eight CL principles: cooperation as a value, heterogeneous

grouping, positive interdependence, individual accountability, maximum peer interaction, equal opportunity to participate, collaborative skills, and group autonomy. Collaborative skills are similar to Johnson and Johnson's (1999a) social skills, and they also include Johnsons' notion of group processing. Furthermore, their idea of group autonomy seems to be strongly influenced by Cohen's (1994) concept of delegating authority. Among these eight principles, Jacobs et al. particularly emphasized the importance of cooperation as a value. They believe that cooperation is not just a way of learning; rather it constitutes an important value in human life that teachers should promote in educational contexts. They also suggested that autonomy, which they defined as students "having power over their own fate" (p. 91), should be promoted to help students become self-directive, a notion that is based on Deci and Ryan's (1985) self-determination theory, which lists autonomy as a basic human need. Jacobs et al. emphasized the importance of scaffolding in order to help students become more autonomous learners. In this sense, their view seems to incorporate more principles from sociocultural theory than the positions taken by other CL proponents.

It is clear from the information previously discussed that variations in the fundamental conception of CL exist. However, at least two principles—positive interdependence and individual accountability—are common among all of them.

### *Cooperative Learning in the Japanese Context*

In Japan, cooperative learning, which used to be known as *Bazu Gakushu*, or Buzz Instruction in Japan, has been implemented at some elementary and junior high schools (Sugie, 1995, 1999). The word *Buzz* (like the buzzing sound of bees) was used to represent the image of small children's active interaction with each other independent of the teacher (S. Sugie, personal communication, January 14, 2008). As an alternative approach to ability grouping, which seems to attract many school administrators at present, CL advocates have been attempting to spread CL to many schools (Sugie, 2005). Although the number of schools where CL is used regularly is still small, once implemented, administrators have often expanded its use to include entire schools or districts. A good example is the use of CL in the city of Inuyama reported by Sugie (2005).

### *The Japanese Version of Cooperative Learning*

Japan has a unique tradition of CL, and CL practitioners in Japan have not fully adopted the Western-oriented CL methods put forth by Western CL advocates such as Johnson and Johnson and Kagan. According to Sugie (1995), CL in Japan has three main models, Buzz Instruction, Small Group Instruction, and Collectivistic Education. Among them, Buzz Instruction has primarily influenced the current views of CL in Japan.

Sugie (1995) explained that Buzz Instruction is based on four basic assumptions: humans are individuals as well as social beings, education is the process assisting

self-education, human relations are the bare bones of education, and learning occurs in social situations where people with various abilities coexist. Furthermore, Sugie pointed out five essential points of Buzz Instruction. First, education should yield a desirable behavioral change in each learner. Second, learners ultimately internalize the knowledge that they have gained through social interaction; therefore, the objective of a task should be clear and appropriate for them. Third, learning requires learners' awareness of the task. Fourth, the learning process is not just a cognitive process; it also involves the integration of cognitive and attitudinal domains. Fifth, feedback is an essential part of evaluation; thus, self-evaluation and peer-evaluation should be utilized. Sugie and his associates have actively promoted CL in Japan based on the above points.

Japanese CL advocates have been open to Western CL, and they have not hesitated to integrate Japanese CL and Western CL. In fact, Johnson, Johnson and Holubec's *Circles of Learning* (2nd edition, 1986), Johnson, Smith, and Johnson's (1991) *Active Learning*, and Sharan and Sharan's (1992) *Expanding Cooperative Learning through Group Investigation* were translated into Japanese by active practitioners of CL in the Japanese context. In addition, Jacobs et al.'s (2002) *The Teacher's Sourcebook for Cooperative Learning* was published in Japanese recently, and the contents of the book were modified so that the book answers questions that Japanese readers might ask. Because of these efforts, the differences between these two traditions have become blurred.

Compared to the U.S., little research on cooperative learning has been reported in Japan. There are many reports of teachers trying to implement CL in their classrooms, but while these reports have been very useful in promoting CL in Japanese schools, they often lack academic rigor. In addition, because most of the reports are written in Japanese, efforts to implement CL in Japan have not been recognized by many people outside Japan.

#### *Research on Cooperative Learning in Japanese Universities*

Although written in Japanese, a series of studies has been conducted at the college level by Yasunaga and his associates. They have been investigating students' perceptions of discussion and skills in the L1 from a psychological perspective. They constructed two batteries to measure students' perceptions of discussions (Yasunaga & Fujikawa, 1998) and how they evaluated their discussion skills after completing the discussions (Yasunaga, Ejima, & Fujikawa, 1998; Yasunaga, Kouhara, & Fujikawa, 1999). Yasunaga, Sekita, Kouhara, and Nagahama (2005) also developed a battery of tests that measured students' understanding of cooperation. They identified four factors: gains from cooperation, losses from cooperation, perceived effectiveness of cooperation, and helping behaviors.

In an effort to connect research and practice, Yasunaga (1995, 1999) and Yasunaga and Nakayama (2002) adopted the *Learning Through Discussion Method* (the LTD method, Rabow, Charness, Kipperman, & Radcliffe-Vassie, 1994, cited in Yasunaga, 1999). In Yasunaga's (1999) study, after the students engaged in the LTD discussions,

they completed two questionnaires regarding their perceptions of discussion and their self-perceived discussion skills. It was found that as students experienced more meetings, they felt closer to each other and lessened their psychological resistance against discussion. Regarding discussion skills, the students reportedly realized that their understanding of and caring for others were not well developed, and they experienced difficulty actively participating in discussions. Another finding was that the students improved their ability to create an atmosphere conducive to successful group discussions, to lead discussions, and to deal with problems arising during the discussions. Yasunaga concluded that the LTD lessons provided the students with opportunities to think about various topics and enjoy learning together.

Yasunaga and his associates' research was rigorous, but unfortunately the studies were all written in Japanese and mostly published in in-house publications. Therefore, their work has not been recognized by many researchers and educators outside Japan.

### *Cooperative Learning in English Education in Japan*

In English education in Japan, CL seems to have been directly influenced by western CL methods rather than traditional Japanese CL. For example, an early attempt to implement CL in a college freshman English class ( $N = 42$ ) was reported by Hirose and Kobayashi (1991). They incorporated three of Johnson and Johnson's (1999a) five principles, positive interdependence, individual accountability, and small group skills, in their English instruction. Their students engaged in a series of group discussions, and

then wrote reactions to the group discussions. According to Hirose and Kobayashi, nearly 80% of the students reported that they liked the group discussions, and about 90% of the students pointed out that they had increased their confidence in speaking English to some degree. However, about 80% of the students did not perceive that they had actually improved their English speaking abilities. About 70% of the students viewed a friendly atmosphere as the most facilitating factor promoting their participation. Hirose and Kobayashi reported only the students' reactions; the teachers' views concerning their students' improvement in English speaking abilities or statistical data showing statistically significant improvement in the students' speaking abilities were not provided.

Gobel (2004) also attempted to implement CL in college EFL classrooms in Japan. He incorporated jigsaw reading in his English classes, observed how the students behaved in group work, and interviewed some of them about their feelings about the class activities. Through the observations, Gobel found that the jigsaw reading groups did not function well. He reported that many students made a minimum effort to participate, showed a lack of responsibility toward their group and their own learning, were passive during the group work, and avoided using English. Through two interviews, he identified further problems. In the first interview, he first identified non-self-directedness, inflexibility, little confidence in potential English ability and general academic ability, and high communication apprehension in many of the students. He found the students' dissatisfaction with their previous experiences in highly competitive and individualistic



English classrooms, too. Because of these past experiences, the students were often prevented from developing group cohesiveness, and they only sought correct answers without discussing the validity of the answers. In the second interview, Gobel identified a gap between the students' general conceptions of group work and their engagement in group work tasks. Although they felt that group work was enjoyable and beneficial, they often preferred to solve problems in Japanese, showed written materials instead of verbally explaining information, and avoided asking clarification questions or taking risks. He concluded that narrowing the gap between expected behaviors in CL group work and Japanese college students' acquired learning style is a challenging job that EFL teachers in Japan must undertake.

An attempt to implement CL in a language laboratory was recently made (Kimura & Ohtake, 2006; Ohtake & Kimura, 2005). Kimura and Ohtake (2006) conducted an action research study designed to investigate how they could increase students' spoken output in LL activities. The students formed small groups, decided what materials they would study, and engaged in CL activities once a week. The activities included checking homework in groups, studying the materials in groups, engaging in group discussions, wrapping up the lesson in groups or as a whole class, and setting goals for the next lesson. The students' reflections and the instructors' observations revealed that most of the students viewed the interpersonal aspects of CL learning experience positively. Furthermore, many students welcomed the change of instructional focus from developing receptive skills to increasing output opportunities. However, Ohtake and Kimura (2005)

also reported that some students resisted learning in CL groups until the end of the semester and few students reported any improvement in their English speaking abilities, which was in line with Hirose and Kobayashi's (1991) study. Relying too much on the L1 and the insufficient use of English were two problems mentioned by the students as well as the instructors (Kimura & Ohtake, 2006). These problems were also pointed out by Gobel (2004).

### *Summary*

In summary, although Japan has a relatively long tradition of using cooperative learning under the name of the Buzz Instruction, recently, efforts have been made to merge the Japanese tradition and the western CL traditions. A great majority of the reports on the implementation of CL were written in Japanese and were conducted in the field of general education. In English as a foreign language, only a few attempts to implement CL have been reported. Most of the researchers investigated how students viewed the CL group work that they had experienced. Common to the literature reviewed here, CL reportedly yielded gains in the development of social skills, trust, and responsibility, but it did not produce tangible academic gains. However, because academic gains were not precisely measured, whether or not CL was an effective teaching method in the EFL context cannot be determined with certainty.

### *Research on the Effectiveness of Cooperative Learning*

The effectiveness of cooperative learning has been studied extensively, particularly in terms of two kinds of comparisons. The first one involved comparing CL's effectiveness over other instructional methods (Johnson, Johnson, & Stanne, 2000; Springer, Stanne, & Donovan, 1999). The second involved comparing the effectiveness of various CL techniques in order to identify which elements made CL effective (Johnson et al., 2000; Slavin, 1995, 1996).

#### *The Effectiveness of Cooperative Learning in Relation to Other Instructional Methods*

Efforts have been made to determine the most effective learning approach where academic outcomes are concerned by comparing the effects of cooperative, competitive, or individualistic learning on academic outcomes (Johnson et al., 2000; Springer et al., 1999). Johnson et al. identified over 900 studies mostly conducted in North America on social interdependence, which is the theoretical underpinning of their version of cooperative learning. They evaluated 164 studies in which the impact of a specific method of CL on student achievement was examined. According to them, 46% of the studies were conducted in elementary schools, 20%, in middle schools, 11%, in high schools, and 24% in college or higher or adult education. Johnson et al. calculated the effect size (Cohen's *d*) in order to compare the effectiveness of CL, competitive learning, and individualistic learning on academic achievement. Their findings suggested that all

of the CL methods explained in their meta-analyses were superior to competitive learning and individualistic learning.

At the college level, the effectiveness of small group work over learning situations in which group work was not employed was investigated for academic achievement, persistence (course completion), and attitude toward learning (Springer, et al., 1999). Springer et al. conducted a meta-analysis of 39 studies on the effect of cooperative small-group learning in college science-related education in the U.S. The effect sizes were calculated for the three outcomes in comparison with the control groups in which students did not work in small groups. It was found that small group learning more effectively promoted achievement ( $d = .51$ ), persistence ( $d = .46$ ), and a positive attitude toward learning ( $d = .55$ ). Note that an effect size (Cohen's  $d$ ) of 0 means no effect, .20 indicates small effect, .50 indicates a moderate effect, and .80 is a large effect (Cohen, 1988). Based on these results, Springer et al. concluded that cooperative small-group learning had a statistically significant positive effect on achievement, persistence, and attitudes among undergraduate science-related majors over learning that did not involve small-group learning.

### *The Effectiveness of Cooperative Learning among Various Cooperative Learning*

#### *Methods*

CL has been implemented in various ways, and attempts have been made to determine which CL approach most effectively promoted academic achievement when

compared to competitive learning. Johnson et al. (2000) found that *Learning Together* ( $d = .85$ ) was the most effective, followed by *Academic Controversy*, *Student Teams-Achievement Divisions* (STAD), *Teams-Games-Tournaments*, *Group Investigation*, *Jigsaw*, *Team Accelerated Instruction*, and *Cooperative Integrated Reading and Composition*. Similar results were obtained for CL in comparison with individualistic learning. Johnson et al. (2000) concluded that conceptual methods, such as *Learning Together* and *Group Investigation*, which provide teachers with a conceptual framework and ask them to make their own cooperative lessons, had a stronger impact on students' academic gains than the direct methods, such as *Jigsaw* or *Cooperative Integrated Reading and Composition*, which provide teachers with specific procedures.

While Johnson et al. (2000) focused on instructional requirements (conceptual vs. direct), Slavin (1995) compared various CL methods by investigating which elements of CL most effectively promoted academic achievement of the elementary and secondary school students. In his 1995 meta-analysis, Slavin found that CL methods incorporating group goals and individual accountability yielded a much higher median effect size ( $d = .32$ ) than the other CL methods (.07) when compared to control groups that did not use any cooperative learning. Slavin (1996), in his summary of various studies on CL, reported that instruction incorporating group goals and individual accountability made the largest contribution to academic achievement, followed by instruction with group goals alone, which was followed by the control group. Instruction with individual accountability alone contributed the least.

Although these findings are insightful, caution is required when interpreting them. These researchers tended to evaluate the methods that they had developed more highly than those developed by others. For example, Johnson et al. (2000) claimed that conceptual methods were more effective than other CL methods. However, conceptual methods were represented by their own Learning Together approach. Slavin (1995, 1996) reported that STAD, which incorporated group goals and individual accountability, was the most effective. However, STAD was developed by Slavin's team. In order to improve the credibility of the results, research done by someone other than the developers themselves is called for.

#### *The Benefits of Group Work for Second Language Acquisition*

Studies of CL have been mainly conducted in general education contexts. Few CL researchers have focused on its effects on L2 learning. In fact, Slavin (1996) cited only one study, and Johnson et al. (2000) did not mention any research that had been done in ESL/EFL contexts. Although studies of CL are rare in ESL contexts, Long and Porter (1985) reviewed studies on ESL students' interactions in group work from a psycholinguistic viewpoint. They focused on aspects thought to promote foreign language acquisition that group work was hypothesized to promote, and found six benefits of group work for L2 learning compared to teacher-fronted whole class instruction: (a) significantly more opportunities to individually practice the target language, (b) a wider range of language functions practiced in group work, (c) no

difference in the accuracy level of the students' utterances, (d) more peer-peer error correction and completion of utterances, (e) more frequent negotiation for meaning, and (f) an increased amount of talk and negotiation work. Based on these findings, Long and Porter concluded that group work should form an important part of L2 instruction.

It has also been reported, from the sociocultural point of view, that collaborative dialogue among peers facilitates L2 learning (Swain, Brooks, & Tocalli-Beller, 2002). Swain et al. stated that when the learners in their study faced linguistic problems and attempted to solve them collaboratively, language was used as a tool for communication and understanding. This collaborative dialogue mediated and promoted L2 learning. Although Swain et al. noted some adverse effects of collaborative dialogue, such as a greater reliance on teacher feedback than peer feedback, students' lack of confidence in providing useful feedback, and conflicts among peers while working together, they concluded that teaching learners the reasons why they should collaborate and the skills to do so may be important ways to promote peer-mediated learning.

#### *Recent Findings on the Effects of Cooperative Learning*

The above meta-analyses compared the effectiveness of CL with competitive and individualistic instructional structures, among various CL methods, and with whole-class instruction. However, recently, research on CL has become increasingly detailed, and researchers have started to pay attention to which students benefit most from CL and under what conditions CL brings about positive outcomes.

*Who benefits most from Cooperative Learning?* CL researchers often claim that CL is beneficial for all learners. However, recently, some studies have suggested that CL may benefit low achievers more than high achievers. Shachar (2003) reviewed eight studies in elementary and secondary schools in Israel and Singapore and found that in terms of academic achievement, pre- and post-tests results showed that low achievers received the most benefit from CL overall, followed by middle achievers. High achievers did not show a significant gain in CL on the posttests, although they did improve their scores. However, comparing CL with whole class instruction, Shachar found that high achievers' achievement in chemistry and mathematics did not differ from those who received whole class instruction, and their achievement in social studies was lower than those who were taught by whole class instruction. Although these results appear to indicate that CL is not an effective instructional approach for high achievers, Shachar presented a different interpretation by proposing that this result was brought about by a discrepancy between the skills developed by CL classes and the objectives that were tested. By closely examining academic growth, as indicated by higher order thinking, social interaction, and the quality of writing, she found that high achievers, as well as low achievers, performed significantly better than their counterparts who received whole class instruction. Therefore, she claimed that the test items were responsible for the high achievers' seemingly lower academic gains.

Similar results to Shacher's (2003) study were reported at the university level by Stockdale and Williams (2004) in their study of the effects of CL study groups on the test



scores of American university students. Three-hundred seventy-eight undergraduate students enrolled in an introduction to educational psychology course studied in academically heterogeneous groups of five students in either Semester 1 or Semester 2. There were three learning phases: the pre-individual study phase, cooperative learning team study phase, and post-individual study phase. The participants were divided into three achievement levels. Stockdale and Williams first found that the students test scores were significantly higher after the cooperative learning team study phase than after the other two phases. Second, they found that the low and average achievers improved their test scores significantly more during cooperative study, but the high achievers' scores slightly declined. This finding was in line with Shachar's finding. The researchers provided two possible explanations for the second finding. First, they might not have had a chance to undergo cognitive conflicts while low and average achievers may have had this opportunity because the high achievers had already clarified their misunderstandings. The second reason that Stockdale and Williams offered was that the group rewards (10 bonus points for all the group members if the group average score exceeded that on the previous exam) provided in the cooperative learning phase in this study might have induced the high performers to help low achievers rather than to focus on their own improvement.

*The effects of group formation.* How groups are formed has also been found to affect students with different achievement levels (Webb, 1985; Lou, Abrami, Spence,

Poulsen, Chambers, and d'Apollonia, 1996), boys and girls (Webb, 1985), and underprivileged students (Sharan & Shachar, 1988) differently.

Webb (1985) found that heterogeneous mixed-ability groups consisting of two ability levels appeared beneficial for all the students, but in mixed-ability groups divided into three ability levels, the highest and the lowest level students benefited but not the intermediate level students. The intermediate-level students benefited most in homogeneous groups. Webb reported that these results were consistent across five studies that she and her colleagues conducted in the U.S. (Webb, 1980, 1982a, 1982b; Webb & Cullian, 1983; Webb & Kenderski, 1984). Similar findings were reported by Lou et al. (1996) in their meta-analysis of the effects of within-class grouping on student achievement. They found that low level students benefited more in mixed-ability groups than in homogeneous groups, but intermediate level students learned best in homogeneous groups. However, their results for the high level students differed from Webb's (1985) finding. In their study, the high level students' learning gains between the two groupings were not significantly different. Second, it was found that gender-balanced groups were beneficial for both girls and boys, but gender-imbalanced groups were detrimental for girls both in cases where boys outnumbered girls and girls outnumbered boys (Webb, 1985). Third, underprivileged students participated equally with middle-class white students in *Group Investigation* group work, and their scores on an achievement test in history reached almost the same level as the white middle-class students (Sharan & Shachar, 1988).

*Conditions for maximum benefit.* What conditions enable CL to result in maximum benefit? Researchers have focused on three conditions: the elements of CL, the role of explanation, and the behaviors of help seekers and help givers.

First, it was found that individual accountability was necessary for high achievers to benefit from CL. Williams, Carroll, and Hautau (2005) investigated how differently individual accountability affected three levels of achievers with 554 undergraduate human development majors in the U.S. They found that for high performers, just giving group rewards did not yield better results. They suggested that including the element of individual accountability in group work was necessary for high achievers to benefit from CL group work. Their finding appears contradictory to Slavin's (1995) finding in which giving group rewards yielded a better outcome than just structuring individual accountability in group work. However, in Slavin's meta-analysis, the students were not divided according to their academic achievement level. If he had investigated the effect of group rewards and individual accountability on students with different academic levels, he might have been found similar results. The participants' ages (elementary and secondary school students in Slavin's meta-analysis and undergraduate students in Williams et al.'s study) might also be another reason for these inconsistent findings because as people mature, they may react differently to rewards and individual accountability.

Webb (1985) investigated the effects of explanation during group work on academic achievement. She found that when students who were mostly high-achievers provided an

explanation and not just information, the help givers' achievement increased. Receiving elaborated explanations were also found to benefit the achievement of the help-seekers, but simply getting answers without receiving an explanation had either no effect or was detrimental to achievement. However, it was found that unless training was provided, students tended to receive or provide only answers without elaboration (Webb & Farivar, 1994).

Webb and Farivar (1999) found four conditions associated with effective explanations in small group work in seventh grade classes in the U.S. In order for explanations to be effective, they should match the help-seekers' need, be offered in a timely manner, be accurate, and be well-elaborated. Webb and Farivar clearly showed the importance of students receiving elaborate explanations and having opportunities to apply the learned knowledge to a new problem in order for effective learning to occur.

Webb and Mastergeorge (2003) investigated the behaviors of help-givers, help-seekers, and teachers that can lead to academic gains in small groups. They synthesized various studies and found that help-seekers needed to ask concrete questions, be persistent in asking for help, and apply the explanation that they receive in a new context. They also found that help-givers should provide detailed explanations, provide opportunities for help-seekers to apply the help that they receive, and monitor the help-recipients' understanding. Finally, the teacher was found to be responsible for creating classroom conditions that would yield the above mentioned helping behaviors among students. Webb and Mastergeorge pointed out that the teacher's behavior affected

the students' helping behaviors; teachers should be explicit about what behaviors are expected, and they should model helping behaviors. They also advised teachers to (a) focus on the learning process rather than the final product, (b) provide students with sufficient time to complete a task and avoid placing too much time pressure on students, and (c) praise effort, accomplishments, and improvement privately, not publicly.

### *Summary*

In this section, the literature on the effectiveness of CL group work was reviewed. Early studies showed that CL was more effective than non-CL instruction and conceptual CL methods were more effective than direct CL methods for promoting academic achievement. It was also found that combining group goals and individual accountability yielded the best results in terms of students' academic achievement. SLA researchers found that group work was effective in that it provided increased opportunities for negotiation of meaning, increased output, and interactionally modified input. Collaborative dialogue was also considered to mediate L2 learning.

Recent researchers have pinpointed some of the particular conditions needed to create effective CL classrooms. CL was found to be effective for low and intermediate achievers, but not necessarily so for high achievers. Grouping students into two heterogeneous academic levels was effective for both high and low achievers, but a three-level heterogeneous grouping was academically beneficial only for low and high achievers, not for intermediate achievers. It was also found that both group goals and

individual accountability were necessary for maximizing academic achievement for high achievers. Looking at the quality of interaction, it was found that help-givers should provide elaborated explanations in order to enhance low achievers' learning. Help-givers should also provide detailed explanations and provide help-seekers with opportunities to use the knowledge in order to enhance learning in small groups. Help-seekers need to ask concrete questions, display persistence, and apply the newly learned knowledge. Finally, teachers' overt teaching and modeling of expected behaviors in group work was found to enhance learning.

#### *Studies on Student Interaction in Small Groups*

CL advocates and books on CL present rather rosy pictures of cooperative learning. However, research on student interaction in small groups in actual (not experimental) classrooms presents a more realistic, mixed picture of CL. These studies were longitudinal, qualitative in nature, and often used observation and interviews as research methods.

#### *Studies in the General Education Context*

Findings on students' behaviors in CL groups are inconsistent. On the one hand, behaviors that promote learning in CL groups have been reported (Hertz-Lazarowitz, 1992; Gillies, 2003b), but on the other hand, behaviors that appear detrimental to learning have been reported (Jacob, 1999).

Hertz-Lazarowitz (1992, original studies reported by Maskit, 1986; Maskit & Hertz-Lazarowitz, 1986, 1989a, 1989b, all written in Hebrew) analyzed adult students' behaviors in CL groups in Israel. First, it was reported that the students engaged both in social (such as group maintenance and group regulation) and academic interactions. Second, students skillfully shifted between interactive and non-interactive (solitary) modes of learning. They used transitional behaviors such as getting group members' attention focused on the interactive, group task before moving from non-interactive, individualistic work. Once students had attracted the group members' attention, they engaged in higher level cooperative academic interactions such as group discussion rather than simple information exchange. Third, during the cooperative mode of learning, off-task, interactive behaviors, such as talking about topics unrelated to the task, were very rare. In short, in successful cooperative groups, students worked harmoniously and managed the transitional, regulative, and cooperative functions of the group well.

Gillies (1999, 2003a) and Gillies and Ashman (1996, 1998) conducted a series of longitudinal quantitative studies (12 weeks to 9 months) investigating changes in the behaviors and verbal interactions of Australian grade school students in structured (CL) and unstructured (non-CL) groups. Gillies (2003b) classified students' behaviors into four categories: (a) cooperative behavior (such as task-oriented behavior and socially oriented behavior), (b) non-cooperative behavior (such as competition and criticism), (c) individual task-oriented behavior, and (d) individual non-task behavior and confusion. Gillies (2003b) reported that the students in both groups showed the same degree of

non-cooperative behavior at the beginning of the course; however, as time went by, the students in the structured groups showed significantly more cooperative behavior (in three studies) and less non-cooperative behavior (in all studies) than their peers in the unstructured groups.

Regarding verbal interactions, Gillies (2003b) reported that the students in the structured groups started to provide more solicited explanation in two of the studies (Gillies, 2003a; Gillies & Ashman, 1998) and more unsolicited explanation in three of the studies (Gillies, 1999, 2003a; Gillies & Ashman, 1998) than those in the unstructured groups over time. More specifically, Gillies (2003a) found that the students in structured groups provided more directions, directions with physical prompts such as pointing, unsolicited explanation, unsolicited terminal (providing just short answers when not asked), positive interruption, solicited explanation, solicited terminal (providing short answers when asked), and nonspecific interactions (interactions that do not fit any category) at the end of the study (either after 12 weeks or 9 months). In particular, students increasingly provided unsolicited explanations as they worked together longer.

Problematic behavior in CL group work has also been reported (Jacob, 1999; Webb & Farivar, 1994). First, insufficient helping behaviors among elementary school students in the U.S. were identified (Jacob, 1999). Second, fewer incidents of providing an explanation as opposed to simply telling the answer was reported (Jacob, 1999; Webb & Farivar, 1994). Third, students were found to engage in more individual work than cooperation where cooperation was expected (Jacob, 1999). Fourth, students often were



unaware of their mistakes and missed opportunities to correct their errors (Jacob, 1999). It is clear that classroom applications of CL do not necessarily always yield student behaviors that books on CL methods suggest will occur; thus, it is important to look at the contexts or conditions in which certain behaviors occur.

Two points should be noted concerning problematic behaviors. The first finding regarding insufficient helping behaviors reported by Jacob (1999) contradicts Hertz-Lazarowitz's (1992) findings. This may be partly because the students were much older and the teachers and the students were more experienced in and familiar with the CL methodology in Hertz-Lazarowitz's study than those in Jacob's study. Regarding the second finding (fewer incidents of providing an explanation), Webb and Favior (1994) demonstrated the effectiveness of training on giving and receiving help in order to counteract the problem of students simply reporting answers.

### *Studies in ESL Contexts*

Learning processes in cooperative learning group work (Klingner & Vaughn, 2000; Klingner, Vaughn, & Schumm, 1998) and interactional patterns in pair work (Storch, 2001, 2002a, 2002b, 2004; Watanabe & Swain, 2007) have been investigated in ESL contexts, too. Klingner and Vaughn (2000) investigated time on task, the amount and type of helping utterances, and peers' response to requests for help in academically heterogeneous CL group work using Collaborative Strategic Reading (CSR) in a fifth grade classroom in the U.S. In CSR, various reading comprehension strategies and

cooperative strategies, such as how to help peers, ask questions, and elaborate on responses, are taught. These strategies were pre-taught before the implementation of CSR. Klingner and Vaughn found consistent strategy use, a high level of task engagement, and a great number of incidents of helping behaviors. Another interesting finding was that the bilingual group members used the L1 to help the limited English Proficiency students. Their study made two points clear. First, in order to promote positive interdependence (helping behavior), it is important for the teacher to equip the students with the necessary language to help one another and explicitly teach skills such as questioning. Second, teachers should acknowledge the productive role that the L1 can play in group work in English language classrooms, especially its function of providing support for linguistically weaker students.

Storch (2001, 2002a, 2002b, 2004) investigated the characteristics of dyadic interaction in an ESL writing classes at an Australian university. In her 2004 study, Storch identified four distinct interactional patterns and investigated how students in each type of pair defined and engaged in the task. The collaborative pairs (the first type) showed evidence of a high level of equality and mutuality. The partners shared the same goal and resources and helped each other learn by pooling their knowledge and giving each other feedback. Dominant/dominant pairs (the second type) contributed to the task equally, but showed only a low level of mutuality. Because showing off their knowledge was their common goal, there was no helping behavior. Dominant/passive pairs (the third type) were low in both equality and mutuality. They had no shared goals. The dominant

partners controlled the task, and the passive partners disengaged from the activity without having a clear idea about their role in the pair. Expert/novice pairs (the fourth type) showed a moderate level of equality and a moderate or high level of mutuality. The experts and the novices had complementary goals; the experts' goal was to help the novices and the novices' goal was to participate in the tasks. In addition to the four patterns identified by Storch (2004), a fifth interactional pattern (expert/passive) was identified in pair work in an ESL class at a Canadian university (Watanabe & Swain, 2007). In this pattern, a less proficient, passive student decreased his involvement over time despite the constant encouragement from the more proficient student.

Based on these findings, Storch (2004) and Watanabe and Swain (2007) concluded that collaborative pairs and expert/novice pairs learn more than dominant/dominant, dominant/passive, or expert/passive pairs. Storch also suggested that in order for successful pair work to occur, pairs should share the same goal or have complementary goals, and the goal has to be focused on the learning process rather than performance. Storch did not connect her study with cooperative learning, but her findings support claims that CL advocates have made concerning the importance of helping behaviors and having common goals.

### *Summary*

In this section, I reviewed literature on student interaction in CL group work. In general education settings, adult learners' skillful regulation of interactive and

non-interactive behaviors and rare occasions of off-task interactive behaviors were reported. It was also found that students developed cooperative behaviors and provided more unsolicited explanations as they worked together in well-structured CL groups. On the other hand, problematic behaviors were also reported: insufficient helping behaviors, providing answers rather than explanations, more individual work than cooperation, and unnoticed mistakes. In ESL contexts, consistent strategy use, a high level of task engagement, and a large number of helping behaviors were reported. The L1 was found to be a catalyst in groups in which L2 learners participated. It was also found that collaborative pairs and expert/novice pairs learned more than dominant/dominant, dominant/passive, or expert/passive pairs.

#### *Studies on Perceptions of Group Work*

Although several researchers in general education settings have investigated students' views of group work or CL group work during and after the group work, students' views of group work before they begin group work and their perceptions of L2 group work have seldom been reported to the best of my knowledge.

#### *Studies of College Level Students*

In college level educational contexts, research has mainly been conducted on five issues: (a) students' perceptions of the development of interpersonal skills (Colbeck, Campbell, & Bjorklund, 2000; Holtfreter & Holtfreter, 2001), (b) students' perceptions

of instructional methods (Garrett & Shortall, 2002), (c) the relationship among cooperative learning, perceived social support, perceived alienation, and perceived academic achievement (Ghaith, 2002), (d) students' perceptions of peers and teachers (Ghaith, 2003; Slimani-Rolls, 2003), and (e) students' perceptions of L2 group work (Fushino, 2006a, 2006b).

*Students' perceptions of the development of interpersonal communication skills.*

Students' perceptions of the development of their interpersonal communication skills were investigated by Colbeck et al. (2000) in the U.S., who reported in their interview study ( $N = 65$ ), a strong relationship between the past group work experience and students' perception of group work. Their study showed that university students had already developed differentiated perceptions about how to work in small groups cooperatively from prior group work experiences. From previous group work experiences and out-of class experiences, the students had shaped their goals, cultivated their leadership skills, learned how to prevent free riders from emerging, and developed the ability to divide labor. Positive previous experiences with group work seemed to help the students develop the skills to cope with problematic group members during a group project, and negative previous experiences led them to learn what to avoid and incorporate in future group work. The students also reported that group work experience cultivated communication, conflict management, and problem-solving skills, all of which

they would need in their future careers. Based on these findings, Colbeck et al. suggested that teachers should mix students with different degrees of group work experience.

While Colbeck et al.'s (2000) study shed light on past experiences, Holtfreter and Holtfreter (2001) focused on American university students' attitudes and beliefs about classroom-learning activities that they were experiencing. They reported that the students felt that the cooperative approach was better than the lecture/discussion approach in that it provided a better opportunity to develop the communication, critical thinking, decision making, interpersonal, teamwork and leadership skills that are necessary to succeed in the workplace and in life. Holtfreter and Holtfreter's (2001) findings are in line with Colbeck et al.'s (2000) findings in that the students perceived cooperative learning as useful for the development of interpersonal communication skills.

*Students' perceptions of instructional methods.* Garrett and Shortall (2002) investigated the perceptions of 103 Brazilian EFL students about teacher-fronted tasks and student-centered tasks involving pair and small group work. They found that teacher-fronted tasks and student-centered tasks differently affected the learners' (beginners, elementary, intermediates) perceptions of the effectiveness, enjoyment, and anxiety associated with grammar and fluency activities. It was found that beginners viewed the teacher-fronted grammar activities as more effective than the student-centered grammar activities. Elementary level students felt that the teacher-fronted fluency activities were more effective than the student-centered fluency activities, but they did

not perceive any difference in terms of enjoyment and anxiety. Intermediate level students perceived the teacher-fronted grammar activities as less enjoyable, the student-centered fluency activities as more enjoyable and less anxiety provoking, but they did not perceive any difference between the two in terms of their effectiveness. These findings indicated that students became less dependent on teachers as their English proficiency developed.

*The relationship among cooperative learning, perceived social support, perceived alienation, and perceived academic achievement.* Ghaith (2002) investigated the relationship among cooperative learning, social support, alienation, and academic achievement of 135 university students in an EFL classroom in Lebanon, and found that (a) students' perception of higher engagement in cooperative learning led to stronger perceptions of teacher support in academic and personal matters; (b) stronger perceptions of teacher support led to a reduced sense of alienation from school; and (c) cooperative learning, teacher academic support, and alienation from school significantly affected the learners' academic achievement. Ghaith also found that learners in high cooperation groups achieved more than those in low cooperation groups.

*Students' perceptions of peers and teachers.* Ghaith (2003), using the same context as in his 2002 study, found that the more students worked in the cooperative small groups,

the more they perceived that grading was fair, they had an equal chance for success, and their teacher and the classmates liked and cared about them.

However, findings contradictory to Gaith's (2003) report have been reported along with findings consistent with his findings. Slimani-Rolls (2003) investigated university students' feelings and perceptions about their peers and the teacher's behaviors and attitudes in the U.K. Sixty first and second year university students who were learning French in groups provided written reactions about their group work experiences. Some students expressed negative reactions to their peers in group work: (a) skepticism about learning from their peers, (b) disturbed interpersonal relationships in group work, (c) negative influences from students with low levels of motivation, and (d) interference from pre-existing adverse relationships among peers. On the other hand, in the groups that functioned well, the students found that their peers were interesting, and explicitly stated that working collaboratively was beneficial.

Ghaith (2003) and Slimani-Rolls' (2003) findings regarding learner's reactions to their teachers are inconsistent, too. In Slimani-Rolls' study, some learners reported that they were perplexed by the gap between the required independence in group work and their previous teacher-controlled instruction, frustrated with the mismatch between what they wanted to learn and what their teacher actually taught, and the discrepancy between their preferred lesson style (more recycling of previous teaching and more individualized instruction) and the teachers' use of group work. Slimani-Rolls claimed that on one hand it was taken for granted that group work would provide learners with a supportive,



affective climate and optimal group work was expected to occur automatically, but on the other hand, in effect, the learners experienced difficulties engaging in group work and were frustrated with the situation as well as the teacher's behaviors and attitudes.

The discrepancy between Ghaith's (2003) findings and Slimani-Rolls' (2003) findings were possibly caused by two factors. First, while Ghaith's study was conducted within a cooperative learning context, traditional group work was used in Slimani-Rolls' study. According to cooperative learning advocates (e.g., Jacobs et al., 2002; Johnson & Johnson, 1999a; Kagan, 2004), carefully structured cooperative learning may reduce the types of negative reactions reported in Slimani-Rolls' study. Second, the research methods used in the two studies differed. Slimani-Rolls' written reactions may have revealed individual students' voices more clearly than Ghaith's questionnaire results. Qualitatively eliciting students' perceptions concerning various aspects of cooperative learning can produce a more detailed understanding of the students' perceptions.

*Students' perceptions of L2 group work.* EFL students' perceptions of L2 group work have also been investigated in Japan. I (Fushino, 2006a, 2006b) investigated the differences in university students' views of L2 group work. A questionnaire designed to measure six constructs (communication apprehension in group work, beliefs about the value of cooperation, beliefs about the efficiency of group work, beliefs about academic growth in group work, beliefs about the relationship with other members, and beliefs about teacher/student roles in college classrooms) was administered to 397 students at

two universities (123 second-year students at a pharmacy university in the 2006a study and 276 first-year students at a general university in the 2006b study). In both studies, the students were positive about the value of cooperation (Rasch logit = 1.39 in 2006a; 1.38 in 2006b, logit 0 shows neutral tendency), and neutral or somewhat negative about the efficiency of group work. The other belief constructs were perceived relatively positively. It was also found that the students in the 2006b study displayed less communication apprehension than those in the 2006a study. In the 2006b study, the students in the Communication course were found to have less communication apprehension and more positive attitudes toward the belief constructs than those in the language and culture course.

### *Studies of Younger Students*

Many studies of student perceptions of group activities have been conducted with students prior to university level. Among these studies, the literature regarding the following two issues is worth reviewing because these issues were not investigated in college level studies. The two issues are: perceptions of cooperative learning classes in different CL implementation conditions (Gillies & Ashman 1996; Johnson & Johnson, 1983; Johnson et al., 1983; Johnson, Johnson, Buckman, & Richards, 1985), and changes of perceptions of cooperative learning classes over time (Gillies, 2003a; Johnson et al., 1985). I included only the studies in which participants were teenagers. Although low teens were much younger than the university students who participated in the present

study, the foci of these studies differed from those conducted at universities and they play a role in complementing the college level studies.

*Perceptions of cooperative learning classes in different CL implementation conditions.* A number of researchers have investigated students in different classroom structures (Gillies & Ashman, 1996; Johnson & Johnson, 1983, Johnson et al., 1983, 1985). Johnson and Johnson (1983) and Johnson et al. (1983, 1985) investigated the difference between students in grades five to nine who were divided into high and low CL classes in terms of their perceptions of social climate. In Johnson et al.'s 1985 study of 91 eighth-grade students in the U.S., the students in the group in which CL was frequently implemented perceived greater positive goal interdependence, student academic and personal support, and class cohesion than those in the group in which CL was less frequently used.

Gillies and Ashman (1996) divided 192 sixth-grade Australian children into two groups, one with training on interpersonal and small-group skills and one without such training, and found that children in the trained groups thought that while engaged in group work, they expanded on points, shared ideas, were sensitive to other members, and jointly made decisions, and they organized group work well statistically significantly more than the untrained group thought.

*Changes of perceptions of cooperative learning classes over time.* Johnson et al. (1985) and Gillies (2003a) examined changes of students' perceptions of cooperative learning classes over time. Johnson et al. (1985) investigated changes in 91 eighth-grade students' perceptions of classroom climate over time in the U.S. They found that the students became significantly more positive regarding positive goal interdependence, resource interdependence, peer academic and personal support, and classroom cohesion after experiencing CL; more positive effects on classroom social support appeared when CL was used in the classroom longer.

Gillies (2003a) compared the perceptions of the 220 Australian grade eight students who experienced structured CL groups incorporating important principles of CL, and unstructured small groups, which did not incorporate CL principles, on the respective type of group work over three academic terms. After the students had participated in the group work, they completed a questionnaire during the last three weeks of the first term as a pre-instructional questionnaire and again in the fourth term in grade eight. She found that regardless of the group, the children perceived that they talked with peers and treated peers with respect significantly more at the end of the fourth term. She also found that the children in the structured condition thought that group work was fun and that they had produced high quality work at the end of the fourth term, but those in the unstructured condition expressed the opposite opinion. Gillies concluded that by the end of the one-year experience of group work, the children who experienced the unstructured group became less positive about their group work experiences. In contrast, the students

in the structured CL groups gained more favorable perceptions of CL small group work, especially regarding their enjoyment and quality of the work. These conclusions were in line with Johnson et al.'s (1985) findings.

### *Summary*

In this section, I have reviewed the literature on students' perceptions of various aspects of group work. At the college level, students perceived CL more positively than the lecture/discussion approach and found it useful for developing social, interpersonal skills. The students' proficiency levels seemed to affect their perceptions of instructional methods; the higher their proficiency was, the more enjoyable and less anxiety-provoking the students viewed the student-centered method. It was also found that greater engagement in CL led to a more positive perception of teacher support, which in turn reduced feelings of alienation from school and produced more academic achievement. Further, more CL work improved the students' perceptions of fair grading, equal chance of success, and liking and trust of teachers and peers. However, in malfunctioning groups, the students perceived their peers and learning from their peers negatively. Students' perplexity and frustration were also reported regarding the gap between their familiar teacher-controlled instruction and the required independence in group work. Japanese students were found to have positive perceptions of the value of cooperation but to feel less positive about the effectiveness of group work. It was also found that

communicative-oriented students were more positive about L2 group work than those who preferred learning receptive skills.

Research on younger students provided three findings. First, students with higher cooperativeness tended to show more positive perceptions of the support, help, and friendship that they received from their teacher and peers. Second, more frequent CL use resulted in greater positive interdependence, academic and personal support among peers, and class cohesion. Also, trained groups were more productive than untrained groups. Third, students with more experience working in CL groups had more positive feelings about interdependence, peer support, and classroom cohesion.

### Affective Factors in Learning an L2

When students work together, affective factors such as communication apprehension, self-perceived communicative competence, and willingness to communicate, also influence their interaction, performance, and learning outcomes in group work. In this section, I will look at literature concerning affective factors.

#### *Communication Apprehension*

Research shows that some people have more communication apprehension than others (e.g., McCroskey, 1977). Communication apprehension is defined as “the fear or anxiety associated with real or anticipated communication with another person or persons” (McCroskey, 1977, p. 78). Communication apprehension is often measured with the

Personal Report of Communication Apprehension (PRCA-24) (McCroskey & Richmond, 1982). On the PRCA-24, trait-like communication apprehension as well as situation-specific communication apprehension in four contexts is measured. The four contexts are groups, meetings, interpersonal (dyads), and public speaking.

In the Japanese context, McCroskey, Gudykunst, and Nishida (1985) investigated how Japanese university students' L2 communication apprehension was similar to or different from that of L1 English speakers. Among 209 participants, 105 students completed the PRCA-Short Form (McCroskey, 1978), which is made up of ten five-point Likert scale items, regarding their L1 communication apprehension, and 104 students did so regarding communication apprehension in English. It was found that (a) the Japanese students showed statistically significantly higher communication apprehension than their approximately 10,000 American counterparts in L1; (b) three-fourths of the Japanese students (in both L1 and L2) were classified as having high communication apprehension, and (c) the Japanese students' communication apprehension in L1 and L2 were almost the same. In this study, the students' communication apprehension in L2 group work was not investigated.

More recent studies showed contradictory results regarding the level of L1 communication apprehension of Japanese students. Keaten, Kelly, and Pribyl (1997) examined levels of communication apprehension of 1,446 Japanese children from kindergarten to high school levels and compared their apprehension levels with American counterparts. In their study, the Personal Report of Communication Fear (PRCF,

McCroskey, Anderson, Richmond, & Wheelless, 1981), which was made up of 14 five-point Likert scale items and was designed for younger students, was used. Keaten et al. reported that the Japanese school children in their study showed increasing levels of communication apprehension in the classroom as they grew older. They also found that Japanese third-year high school students reported slightly higher communication apprehension than the American K-12 students, but the difference was negligible.

In contrast, Pribyl, Keaten, Sakamoto, and Koshikawa (1998) investigated Japanese university students' ( $N = 283$ ) level of communication apprehension with the PRCA-24. They compared the results with normative means taken from American samples published by Richmond and McCroskey (1995, cited in Pribyl et al.), and reported that Japanese college students had higher communication apprehension (PRCA-24 total and four situation-specific measures of communication apprehension) than their U.S. counterparts in all respects. The Japanese participants' PRCA-24 total score was 76.70 ( $SD = 15.54$ , Maximum = 120), while that of the American samples was 65.50 ( $SD = 15.30$ ). Situation-specific context results (Maximum = 30) were: public speaking, 20.39 (Japanese), 19.39 (Americans); dyad, 17.18 (Japanese), 14.50 (Americans); meeting, 20.08 (Japanese), 16.40 (Americans); and group, 19.14 (Japanese), 15.40 (Americans). Although Pribyl et al. did not conduct  $F$ -tests to determine if the differences were statistically significant or not, the descriptive statistics clearly indicated the Japanese students had higher communication apprehension than their American counterparts. Their



results were consistent with the results presented by McCroskey, Gudykunst, and Nishida (1985).

How might these two results be interpreted? At the college level, Japanese college students displayed more communication apprehension than their American counterparts to a statistically significant degree. However, younger students (up to high school level) in the two countries did not show strong differences. One possible reason might be provided by the measurement differences. The PRCA-24 and PRCF might not measure the same construct, a possibility that Keaten et al. (1997) noted. However, when considering the trend of increasing communication apprehension in relation to age, it is possible to view these two results as compatible.

Dwyer (1998) investigated the relationship between communication apprehension and the learning style preferences of 436 university students in America. She used the PRCA-24 and the 15 item Learning Type Measure Part A (LTM-A, McCarthy, 1993, cited in Dwyer) to measure learning style preferences. The participants were classified as having high CA (CA = communication apprehension), moderate CA, and low CA based on the total scores on the PRCA-24. They were also classified into four categories: personalizing collaborators (seeking harmony), analytic evaluators (seeking intellectual understanding and evaluation), hands-on experimenters (seeking practical solutions and preferring hands-on experiences), and innovative explorers (seeking self discovery) based on the results of the LTM-A. Dwyer found that women with high CA preferred the Hands-on Experimenter style. She proposed that individuals with high communication

apprehension need a more structured learning environment because they do not often have enough communication skills to help them feel competent in an active, undirected learning environment.

Recently, an alternative idea that communication apprehension is a cross-linguistic trait was presented by Jung and McCrokey (2004). They hypothesized that communication apprehension was affected more by innate, biological temperaments than situations (stimulus), and thus temperaments should affect L1 communication apprehension and L2 communication apprehension equally. Based on this idea, they conducted research designed to provide a scientific explanation for the antecedents of communication apprehension with 120 international university students proficient in English in the U.S. They found that L1 communication apprehension was a better predictor of L2 communication apprehension than self-perceived communication competence in the L2, even for L2 English speakers who had spent years living in the U.S. and speaking English. They also found that genetic temperaments (psychoticism, extraversion, and neuroticism) were correlated with L1 and L2 communication apprehension. However, their study dealt with communication apprehension as a whole, and they did not investigate the relationship between L2 communication apprehension (a state-like communication apprehension) and temperaments.

As is clear, the PRCA-24 has been widely used to measure communication apprehension, and it has been put forth as a valid measure of trait-like communication apprehension (McCroskey, Beatty, Kearney & Plax, 1985; Rubin, Palmgreen, & Sypher,

1994, cited in Pribyl, Keaten, Sakamoto, & Koshikawa, 1998). However, it was originally designed to measure communication apprehension of Americans, and its cross-cultural validity was not closely examined until 1998. Pribyl et al. investigated the PRCA-24's content validity in the Japanese context. With data from 283 Japanese college students, they conducted an unrotated principal components analysis (PCA) of the PRCA-24, and reported that it measured trait-like communication apprehension. However, the results of a rotated PCA indicated that the PRCA-24 did not differentiate group, meeting, and public speaking contexts clearly. Therefore, they concluded that although the PRCA-24 could be used to measure trait-like communication apprehension, and that it was appropriate for the Japanese context, it may not be suitable to measure state-like communication apprehension in Japan. Another finding was that Japanese college students' mean scores for PRCA-24 as a whole were higher than those of their U.S. counterparts.

### *Self-perceived Communication Competence*

Self-perceived communication competence was defined as the self-perception of “adequate ability to pass along or give information; the ability to make known by talking or writing” (McCroskey & McCroskey, 1988, p. 109). McCroskey and McCroskey developed the Self-perceived Communication Competence scale, which measure self-perceived communication competence in four communicative situations (small

group, meetings, pair, and public speaking) and with three types of interlocutors (strangers, acquaintances, and friends).

Richmond, McCroskey, and McCroskey (1989) investigated the relationships between self-perceived communication confidence and several personality-type variables with 216 university first-year students in the U.S. Based on the results of Pearson correlations and multiple regression analyses, they found that the association between self-perceived communication competence and communication apprehension was the strongest, and communication apprehension was the strongest predictor of self-perceived communication competence. Introversion, self-esteem, and sociability were also found to be important predictors of self-perceived communication competence.

Within the SLA paradigm, MacIntyre and his associates adopted the concepts of communication apprehension and self-perceived competence from McCroskey and his associates' studies. MacIntyre, Baker, Clément, and Donovan (2003) used 12 items from the communication apprehension scale and 12 items adapted from the perceived communication competence scale both developed by McCroskey, Richmond, and McCroskey (1987, cited in MacIntyre et al., 2003). MacIntyre and his associates (e.g., Clément, Baker, & MacIntyre, 2003; MacIntyre & Charos, 1996) also used these two scales, and in the Japanese context, Yashima (2002) and Yashima, Zenuk-Nishide, and Shimizu (2004) used the same instruments.

Using a different measurement, MacIntyre, Noels, and Clément (1997) investigated the relationships among L2 perceived competence, actual L2 competence, and language

anxiety with 37 Anglophone students who were learning French at a Canadian university. MacIntyre et al. administered a can-do test which asked the students to determine how confident they were in performing 26 tasks. Then, the students were asked to actually perform the tasks. MacIntyre et al. found that although these three constructs were correlated to one another, students with stronger anxiety tended to underestimate their actual competence, and those with lower anxiety tended to overestimate their L2 competence.

### *Willingness to Communicate in an L2*

Willingness to communicate (WTC) in an L2, which is defined as “a readiness to enter into discourse at a particular time with a specific person or persons, using an L2” (MacIntyre, Clément, Dörnyei, & Noels, 1998, p. 547), is also considered to affect how students engage in CL group work in an L2. Dörnyei (2003a) stated that L2 WTC is situated at the intersection of motivation and communicative competence research.

### *MacIntyre et al.'s Heuristic Model of Willingness to Communicate in an L2*

MacIntyre et al. (1998) proposed a six-layered heuristic model (Figure 1) of variables that influence L2 WTC. The first layer is actual L2 use, which is directly influenced by L2 WTC (Layer 2). Layer 3 has two constructs, desire to communicate with a specific person and state communicative self-confidence. Factors in Layer 3 directly influence L2 WTC. These three layers are considered to be situation-specific

influences. Layers 4, 5, and 6 are considered stable, long-lasting influences on L2 WTC. Layer 4 represents motivational propensities and consists of three constructs; interpersonal motivation, intergroup motivation, and self-confidence. Layer 5, which represents the affective-cognitive context, includes intergroup attitudes, social situation, and communicative competence. The bottom layer, Layer 6 is the social and individual context that consists of intergroup climate and personality. As a layer is more distant from L2 WTC (Layer 2), its influence on WTC is believed to be more indirect.

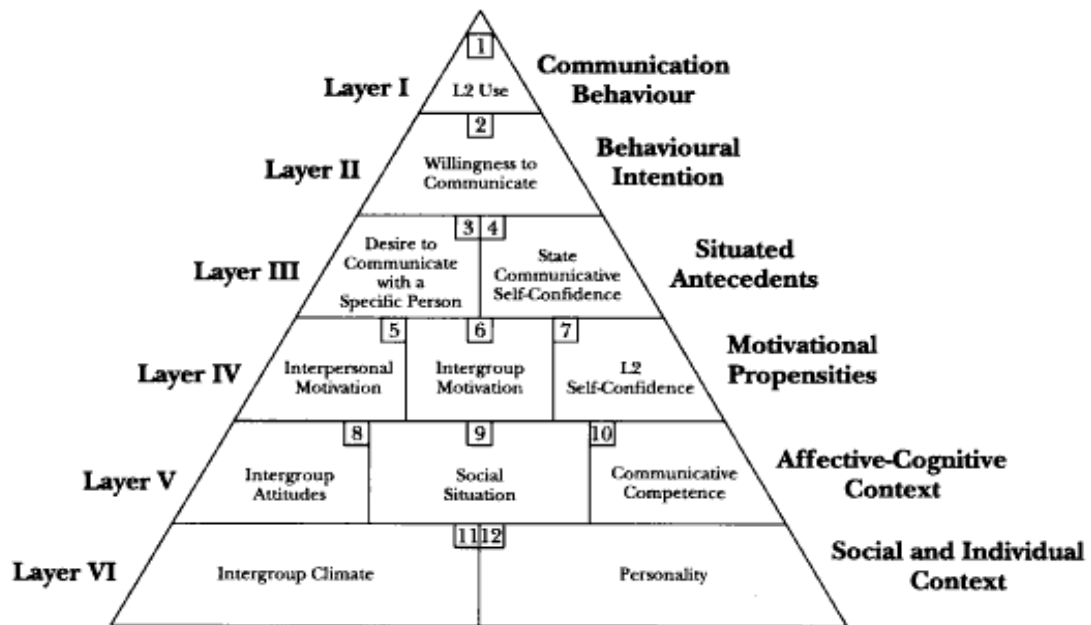


Figure 1. MacIntyre et al.'s heuristic model of variables influencing WTC (1998, p. 547).

MacIntyre and Charos's (1996) study conducted in a Canadian university context, found that perceived L2 communicative competence, L2 anxiety, and motivation are directly related to L2 WTC. They also found that integrativeness and attitudes toward the

learning situation are related to L2 WTC through motivation. Perceived L2 communicative competence is students' self-perception of their ability to communicate in an L2.

### *L2 WTC in the Japanese Context*

Yashima (2002) and Yashima, Zenuk-Nishide, and Shimizu (2004) applied MacIntyre and Charos's (1996) model to the Japanese context. They hypothesized that L2 WTC in the Japanese context is directly influenced by (a) students' confidence in L2 communication, which is made up of communication apprehension in the L2 and perceived communicative confidence in the L2, (b) motivation, and (c) international posture, which consists of "interest in foreign or international affairs, willingness to go overseas to stay or work, and a readiness to interact with intercultural partners" (Yashima et al., 2004, p. 125). If a student has low L2 communication apprehension and high self-perceived communicative competence in the L2, the person is considered to have high L2 communication confidence. Yashima and Yashima et al. tested their model (Figure 2) using structural equation modeling and found that L2 WTC is directly influenced by international posture and communication confidence, but not L2 learning motivation. L2 motivation is an intervening variable that indirectly influences L2 WTC by influencing L2 communication confidence.

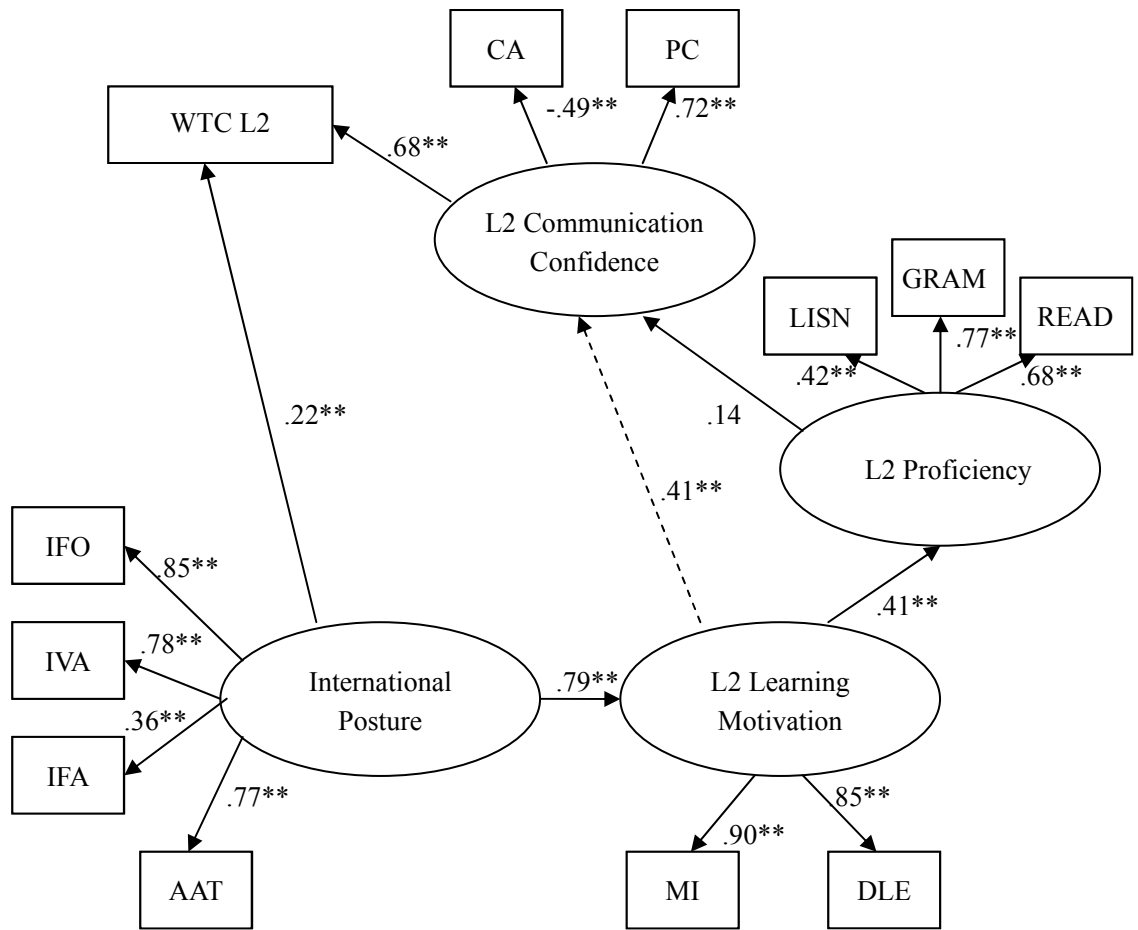


Figure 2. Yashima's model of L2 WTC (2002, p. 61). \*\* $p < .01$ ;  $\chi^2(49) = 62.63$ , n.s.; GFI = 0.97; AGFI = 0.95; CFI = 0.99; RMSEA = 0.031; WTC L2: Willingness to Communicate in L2; CA: Communication Anxiety in L2; PC: Perceived Communication Competence in L2; LISN: Listening Comprehension; GRAM; Grammar & Vocabulary; READ: Reading Comprehension; IFO: Intercultural Friendship Orientation in Learning English; JVA: Interest in International Vocation/Activities; IFA: Interest in Foreign Affairs; AAI: Intergroup Approach Avoidance Tendency; MI: Motivational Intensity; DLE: Desire to Learn English.



### *Summary*

Communication apprehension, self-perceived communication competence, and willingness to communicate all originated in communication studies conducted by McCroskey and his associates. In investigation of these constructs, researchers found that Japanese college students' communication apprehension was higher than that of their American counterparts and that communication apprehension and self-perceived communication competence were closely related. McCroskey and his associates also developed instruments designed to measure communication apprehension and self-perceived communication competence, which have been widely used in various studies, including studies of L2 willingness to communicate. The PRCA-24 was the most commonly used scale to measure communication apprehension, and was claimed to be reliable and valid. However, a recent study conducted in Japan has cast doubt on its subcomponents' content validity for Japanese students.

The concept of L2 willingness to communicate was developed from L1 willingness to communicate studies. It is affected by various contextual features and is considered to predict students' participation in L2 communication. L2 willingness to communicate studies have been conducted extensively in Canada (a second language context), where it was found that perceived L2 communicative competence, L2 anxiety, and motivation are directly related to L2 WTC. However, in foreign language contexts such as in Japan, it was found that L2 communication confidence and international posture directly affected L2 willingness to communicate.

**CHAPTER 3**  
**PROBLEMS WITH RESEARCH ON COOPERATIVE LEARNING**  
**THAT LED TO THIS STUDY**

In Chapter 2, the literature that provides the background of this study was reviewed. In this chapter, the focus is on three problems with research on cooperative learning that lead to this study: the concept of participation, students' perceptions of group work, and the relationship between beliefs about group work and affective factors. After that, the statement of the problems, the research questions, and hypotheses will be presented.

The Concept of Participation

First, as every classroom teacher knows, no instructional method is perfect. CL, too, is not free from flaws. My experience as a teacher who has been trying to incorporate CL tasks in my Japanese university EFL classrooms has shown me that student participation in CL groups sometimes differs from what it is supposed to be. Some students do not participate in CL group work effectively. CL advocates view these students as not contributing to their groups and peers (Johnson & Johnson, 1999a). Their suggestions to deal with this kind of situation are that the teacher should look more closely at the CL tasks, identify any flaws in them, and adjust them because something must be wrong with the way that the task is structured. However, they acknowledge that CL does not always yield the desired outcome, perhaps because of factors beyond the teacher's control, such

as low student motivation (e.g., Cohen, 1994; Jacobs et al., 2002; Johnson & Johnson, 1999a; Kagan, 1994). However, can all participation problems be fixed by restructuring tasks?

Here, I see a limitation in CL theories, especially when proponents claim that equal participation and active participation are essential elements if successful CL is to occur. Kagan (1994), among others, proposed various CL tasks that promote equal participation. He also stated that students must have an equal opportunity to participate, and to him equal participation appears to mean an equal amount of talking time or an equal number of talking turns. Students who do not speak up are viewed as not fulfilling their responsibility. Johnson and Johnson (1994) presented a similar view when they stated that “Silent students are uninvolved students who are not contributing to the learning of others as well as themselves” (p. 58). However, it seems to me that what Kagan describes as equal participation is really only visible participation. We cannot see whether or not particular students are learning just from the amount of talking time. Moreover, can we conclude that students are not participating in group work just because they are not talking? They may be participating in the group work by deeply thinking about the task. Saville-Troike (1988) and Ohta (2001) pointed out similar problems often found in foreign language acquisition studies. They expressed concern over the tendency among foreign language researchers to believe that when overt production occurs, active learning is taking place, and that a lack of overt production is a sign that students are passive and disengaged. Based on her study on private speech, Ohta (2001, p. 12) wrote,

“seemingly a silent learner is neither passive nor disengaged, but is involved in an *intrapersonal* interactive process” (italics added).

Another problem with the concept of equal participation is apparent when we consider college level or adult students. As students grow older, we hope that they become more autonomous and independent, and CL should be implemented in a way that leads them in that direction. Because CL has been widely implemented in elementary level education (Bruffee, 1999), many CL techniques emphasize equal participation in order to prevent one child from dominating the group work or another child from being ignored. Although structuring tasks so that the principle of equal participation is embodied in them is reasonable in elementary school classrooms, I believe that older students should be encouraged to increasingly exercise responsibility for their own learning, particularly at the college level. The tasks used in college classrooms should allow the students to exercise their autonomy rather than focus on surface-level equality and activity. In other words, the students should be allowed to have the freedom to choose how they want to accomplish a task and how they want to participate in their group, as Bruffee (1999) suggested. However, this freedom often produces different degrees of so-called “participation.” While some students verbally exchange their opinions by talking, others may quietly listen to and observe their peers interact. As Leki (2001) reported in her study on how nonnative-English-speaking students engage in group projects with native-speaker students, for some nonnative-English-speaking students, initial peripheral participation is desirable if full participation is the long-term

goal. Although her study was not an investigation of interaction among non-native speakers of English, the idea that some students benefit from peripheral participation may be applied to CL group work among EFL students.

Some people might say that group work in classrooms (whether in CL groups or traditional groups) differs from the communities of practice that sociocultural theory and situated cognition theories describe. Those people might also say that there are usually no obvious old-timers or newcomers in groups in school classrooms or that there are no obvious masters or apprentices in groups, either. In particular, if grouping is based on ability and students share the same L1, their claim might seem legitimate. However, the group work that college-level students have previously experienced significantly varies (Fushino, Interviews with five students, November 2004). Therefore, as far as group work experience is concerned, some students can be called old-timers and others newcomers. For example, while some students have experienced group work extensively in and out of school, others have almost no experience of group work in academic settings. In Japan, when students are in elementary school, they experience various types of group work, such as serving lunch, cleaning classrooms, and organizing school festivals and athletic festivals (Kristof, 1997). In social studies classes in elementary and junior high schools, group projects (*shirabemono gakushu*) are sometimes assigned, and students collaboratively engage in the assigned tasks. Also, at some junior high schools, such as Sumiyoshi Junior High School, which is an extension of Kobe University (observation of an open class, at *Zenkoku Kyodo Gakushu Kenkyu Taikai* held on

February 18, 2005 in Hyogo Prefecture), CL is employed school-wide. However, as Japanese children grow older, opportunities for group work often decrease, and in general, almost no group work is employed in college-oriented high schools. On the other hand, a few Japanese students have experienced group work extensively in high school English classes.

Apart from school activities, the experience of group play also varies among children. Some children play outside with friends in groups and take part in sports clubs or boy/girl scouts, while others prefer to play videogames or read comics even when they are with friends (Fushino, Interview data, November 2004). In such cases, almost no interaction takes place. Therefore, by the time Japanese students enter universities, their group work experiences are quite diverse. Because of these divergent experiences, it is plausible that some students are old-timers and others are newcomers as far as group work experience is concerned. Newcomers may need time to become full participants in classrooms. Therefore, narrowly conceptualized participation is problematic.

### Students' Perceptions of Group Work

The second problem with research on cooperative learning is that student perceptions of CL have not been investigated extensively (for a review of the few studies available, see Chapter 2). The authors of CL method books pay little attention to students' perceptions of group work or CL group work. They view group work from a teacher's perspective; thus, little is known about how students view CL, in particular,

students' initial views of group work have rarely been reported. Liang, Mohan, and Early published a review article in 1998 that called for research on this issue, but, because of the scarcity of research in this area, Liang had to make the same point again in her 2004 paper. In fact, as is clear from the section in Chapter 2 in which studies on students' perceptions were reviewed, no researcher except me (Fushino, 2006a, 2006b) has directly investigated college students' perceptions or beliefs about L2 group work when they began group work in English classrooms. As a result, we know little about how students view ordinary L2 group work, let alone CL group work in L2 classrooms. When we consider students who are bringing their beliefs and attitudes to the L2 classroom, what we have to know first is their perception of L2 group work.

Gorsuch (2000) reported on beliefs about the communicative approach that Japanese high school teachers hold. She suggested that their beliefs were still strongly related to Japanese college entrance exams and were therefore accuracy-oriented. It is not difficult to imagine that college students who were educated by such teachers in their high schools are also accuracy-oriented and view teachers as knowledge transmitters, which is a drastically different view from that held by teachers who practice CL. Accuracy-oriented students are also likely to prefer to listen to lectures rather than to participate in group discussions. In fact, Matsuura et al.'s (2001) study reported that Japanese college students preferred teacher-centered instruction, such as listening to lectures and learning isolated skills (such as certain grammar points and the pronunciation of particular sounds), as opposed to learning integrated skills (such as

communication skills in task-based instruction) and participating in accuracy-based activities. The students believed that listening to lectures was an effective way to learn English, although they also viewed group work as a more effective way to improve their English than individual work. However, Bruffee (1999) pointed out that some students show considerable resistance to group work because they have been exposed to traditional classrooms where only the teacher is granted authority.

Student perceptions of group work are likely to affect their actual engagement in ordinary group work, and even in well-structured CL group work, their engagement will probably not be uniform. For example, if they believe that group work is inefficient and ineffective, they may try to work individually instead of working together (cf. Coughlan & Duff, 1994; Leki, 2001).

Students can opt out of group work for various reasons. They may lack adequate knowledge of the subject matter, not feel well on a particular day, not be motivated to study the subject matter, or have bad relationships with other students or the teacher, with the result that these factors may adversely affect the quantity and/or quality of participation (Leki, 2001; Morris & Tarone, 2003).

The relationship between students' perceptions and their actual engagement in L2 group work is further explained by expectancy-value theory. According to expectancy-value theory (Wigfield & Eccles, 2000), individual choice, persistence, and performance are affected by learners' beliefs about the possibility of successful accomplishment and their perceived value of the activity. By applying this theory to the



group work situation, we can better understand why students with different beliefs about group work will participate in group work differently. Students' perceptions of group work influence the outcome of cooperative work because it is students who actually work in groups with various expectations and values of group work. Nonetheless, in much of the CL literature, students are treated as if they start group work without any particular expectations of group work.

Furthermore, Nyikos and Hashimoto's (1997) study of teacher education indicated that affective factors strongly influence the degree of potential knowledge growth and accommodation of new ideas and interactional patterns in group work (not CL group work) among adults. Thus, when thinking about college students in EFL settings who have already absorbed their own countries' culture and are strongly influenced by it, overlooking their perceptions leads to an incomplete understanding of CL.

#### The Relationship Between Beliefs about Group Work and Affective Factors

A third issue that led to this study concerns the relationships among students' communication apprehension, perceived communicative competence, their beliefs about group work, and their willingness to communicate in L2 group work.

*Communication Apprehension and Self-perceived Communicative Competence  
in L2 Group Work*

A number of researchers have investigated communication apprehension (e.g., Dwyer, 1998; Jung & McCroskey, 2004; Keaten et al., 1997; McCroskey, 1982; McCroskey, Beatty, et al., 1985; McCroskey, Gudykunst, & Nishida, 1985) and perceived communication competence (e.g., McCroskey & McCroskey, 1988; Jung & McCroskey, 2004; Richmond, McCroskey, & McCroskey; 1989). In the PRCA-24 (McCroskey, 1982), six items specifically focus on communication apprehension in group discussions. Although group work potentially involves more various types of interaction than group discussion and these six items are not limited to classroom settings, with modification, these items can usefully measure students' communication apprehension in L2 group work in the classroom.

Some forms of group activities require relatively high level communication skills and the ability to engage in spontaneous interaction. Therefore, combining the results of the study by Dwyer (1998) and the claims of expectancy-value theory (Wigfield, 1994; Wigfield & Eccles, 2000) that perceived competence is an element affecting performance, it is not difficult to imagine that individuals with a high degree of communication apprehension will not participate in group work actively. As noted above, Keaten et al. (1997) reported that the Japanese school children in their study showed increasing levels of communication apprehension in the classroom as they grew older. It has also been reported that Japanese college students showed stronger communication apprehension

than their American counterparts (McCroskey, Gudykunst, & Nishida, 1985; Pribyl et al., 1998). However, those studies were focused on trait-like communication apprehension and self-perceived communication competence, and those constructs were not related to L2 group work. In the cooperative learning and small group work literature, no researchers have investigated the relationships among beliefs about (L2) group work, communication apprehension, and self-perceived communication competence.

### *Willingness to Communicate in L2 Group Work*

Modifying and applying Yashima's (2002) and Yashima et al.'s (2004) model of L2 Willingness to Communicate to the L2 group work context is beneficial to enhance our understanding of *Willingness to Communicate in L2 Group Work*. Although CL group work is structured so as to encourage students' participation, teachers cannot force the students to interact. This also holds true for traditional group work. Therefore, students have the freedom to decide whether they will participate in group work or not. Even in well-structured CL tasks involving relatively complex student-student interaction, it is likely that students' *Willingness to Communicate in L2 Group Work* may have a strong impact on their actual participation in the group work. However, in this case, communication occurs in L2 group work, not outside the classroom; therefore, it is hypothesized that a factor different from International Posture (Yashima, 2002; Yashima et al., 2004) will affect their *Willingness to Communicate in L2 Group Work*. If the factors that affect *Willingness to Communicate in L2 Group Work* are identified, it may

help classroom teachers to tailor their instruction in ways that will boost students' engagement in classroom tasks.

### Statement of the Problems

As seen in the literature review, CL is an alternative to traditional teacher-fronted instruction that has been implemented differently by various CL advocates. CL's effectiveness has been studied extensively and many CL researchers have demonstrated its effectiveness compared to other instructional methods. Although CL researchers have shed light on many aspects of this approach, four issues have not been thoroughly investigated to date.

First, it is important to investigate how students view L2 group work, as students' views or beliefs about group work are likely to influence their actual engagement in CL group work. Besides, although it is often claimed that cooperation itself has value in human life (Jacobs et al., 2002), it is not clear if students themselves value it to the same degree as CL advocates do. However, the research on CL conducted up to now has mainly dealt with the effectiveness of CL, and students' views or beliefs about group work have not been investigated. Additionally, understanding students' *Readiness for L2 Group Work* will potentially allow teachers to tailor their instruction to their students and their needs. Therefore, investigating students' perceptions of group work should be at the forefront of any research agenda that hopes to cast light on CL.

Second, few researchers have investigated what factors influence student behaviors in group work. Although affective factors in L2 contexts have been extensively investigated, those in L2 group work have not been studied adequately. For example, communication apprehension in L2 group discussion was only investigated as one of four situations that provoke L2 communication apprehension, and has never received special attention. More generally, we do not know what factors make students want to communicate in L2 group work. Without first identifying influential factors, we cannot investigate the relationships among them. Therefore, identifying factors that affect students' *Willingness to Communicate in L2 Group Work*, which is considered to be a direct antecedent of actual communication in L2 group work, is needed.

Third, the relationships among factors that possibly affect students' willingness to work in groups have not been studied. In particular, within the L2 cooperative learning research paradigm, the relationships between CL and affective factors, such as communication apprehension, self-perceived communicative competence, and willingness to communicate, have not been researched despite the fact that CL advocates reported that CL methods increased students' motivation (cf. Johnson & Johnson, 2003; Sharan & Sharan, 1992). In the communication study field, the relationship among trait-like communication apprehension and self-perceived communication competence and personality orientations has been investigated (e.g., Richmond et al., 1989); however, in the SLA paradigm, no researchers have investigated the relationships among *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative*

*Competence in L2 group*, and *Beliefs about L2 Group Work* to the best of my knowledge. We do not know whether *Communication Confidence in L2 Group Work*, which is an aggregated construct that consists of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work* (cf. Clément, Baker, MacIntyre, 2003; Yashima, 2002), affect *Beliefs about L2 Group Work*, or vice versa. Although Yashima investigated factors that affect Willingness to Communicate in L2, applying her L2 WTC model to the L2 group work situation has not been attempted. Therefore, a study designed to investigate how *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, and *Beliefs about L2 Group Work* affect students' *Willingness to Communicate in L2 Group Work* is worth conducting.

Fourth, research on small group work (including CL group work) has not been adequately conducted in the Japanese context. Although research suggests that CL can be an effective teaching method, most of the research on CL has been conducted outside Japan and in general educational contexts such as elementary schools or secondary schools. Because little research on small group work in EFL situations has been reported, little is known about the effects of small group work in EFL classrooms. There are potentially a number of differences between Japanese students and the participants in studies conducted outside of Japan. For example, Japanese high school students tend to be passive, at least on the surface, because of highly competitive, individualistic, teacher-centered, exam-oriented English education (Brown, 1996; Gobel, 2004; Gorsuch,

2000; Matsuura, Chiba & Hilderbrandt, 2001). On the other hand, when Japanese children are young, they often engage in more cooperative work academically and socially. Therefore, it is still unclear if small group work is viewed positively by these students or not. Few academically rigorous studies have been conducted in Japan on this issue. Carefully designed studies are necessary if we are to more clearly understand small group work in the Japanese context. In particular, studies at high school and university levels will provide a more complete picture of CL in Japan.

### Research Questions

The following research questions have been posed in order to address the first three issues described above. Note that “group work” in the research questions is used broadly and includes both traditional group work where students simply learn in small groups (two to six students) with or without having the common goal and CL group work. This decision was made because it is unrealistic to expect students to differentiate traditional group work from CL group work. In addition, readiness for (CL) group work concerns students’ readiness for actually working together, and whether or not group work is traditional group work or CL group work is unimportant. Therefore, if students are judged “ready for group work,” they are ready for group work regardless of how the group work is structured. The following research questions will be investigated in this study:

1. What is the students' *Readiness for L2 Group Work* immediately upon entering a university and after studying one semester?
2. To what degree does the students' *Readiness for L2 Group Work* differ due to the type of course and proficiency grouping at the onset and the end of one semester?
3. To what degree does the students' *Readiness for L2 Group Work* change due to the type of course and proficiency grouping between the beginning and the end of one semester?
4. What are the relationships among *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative competence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*?
5. How does each component of students' *Readiness for L2 Group Work* affect their *Willingness to Communicate in L2 Group Work*?

Regarding the above research questions, the following hypotheses were made:

Research Hypothesis 1: Students' *Readiness for L2 Group Work* is low because of Japanese students' relatively high *Communication Apprehension in L2 Group Work*, relatively low *Self-perceived Communicative Competence in L2 Group Work* and their limited experience of group work in secondary school.

Research Hypothesis 2: Based on expectancy-value theory (cf. Wigfield, 1994; Wigfield & Eccles, 2000), students in the Communication course and higher proficiency students will be more ready for L2 group work in an L2 than those in the Language and Culture course and the lower proficiency students. This is because L2 group work



requires a relatively large degree of student initiative, which less communicatively-oriented and less proficient students find more difficult to exert.

Research Hypothesis 3: If the instruction offered in the Communication course matches students' expectations, they will become more ready for L2 group work at the end of the semester than at the beginning of the semester. On the other hand, if the instruction does not meet the students' expectations, they will become less ready for L2 group work at the end of the semester.

Research Hypothesis 4: (a) *Communication Apprehension in L2 Group Work* is negatively correlated with *Self-perceived Communicative Competence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 group work*; (b) three sub-constructs of *Beliefs about L2 Group Work* are all positively correlated to one another because they all concern group work; and, (c) *Willingness to Communicate in L2 Group Work* will be positively correlated with *Self-perceived Communicative Competence in L2 Group Work* and *Beliefs about L2 Group Work* and negatively correlated with *Communication Apprehension in L2 Group Work* as suggested by McIntyre and Charos (1996) and Yashima (2002).

Research Hypothesis 5: *Beliefs about L2 Group Work* indirectly influences *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*. The concept *Beliefs about L2 Group Work* is used instead of International Posture (Yashima, 2002) because this concept was thought more relevant for this situation (CL group work in English classes) than International Posture. Second, unlike

Yashima's model (see Figure 2), only three latent variables are included in the structural model that will be tested in this study because the focus is on the relationship among these four concepts. Third, I view beliefs as being relatively stable, not easily changing from class to class. On the other hand, beliefs are changeable over time; thus, it is not a complete trait. Therefore, *Beliefs about L2 Group Work* should be located in Layer 4 in MacIntyre et al.'s (1998) model (Figure 1). In this conceptualization, *Beliefs about L2 Group Work* indirectly affects *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*, which is affected by *Beliefs about L2 Group Work*.

## CHAPTER 4

### METHOD

#### Participants, the Research Site, and Research Period

##### *Participants*

Seven hundred and seventy-two first-year university students from 22 classes taught by eight teachers completed Questionnaires 1 and 2. Table 1 shows the courses and the proficiency levels of the respondents.

Table 1. *Courses and Levels of the Questionnaire Respondents*

	Level 1 (higher proficiency)	Level 2 (lower proficiency)	Total
LAC	4 classes $n = 153$	9 classes $n = 347$	13 classes $N = 500$
COM	3 classes $n = 102$	6 classes $n = 170$	9 classes $N = 272$
Total	7 classes $n = 255$	15 classes $n = 517$	22 classes $N = 772$

*Note.* LAC = Language and Culture course; COM = Communication course.

Three hundred and sixty-seven of the participants (47.5%) were male and 402 (52.1%) were female. The gender of three students was unknown. The mean age of the participants was 18.43 years old ( $SD = .86$ ). Seven hundred and fifty-three (97.5%) of the respondents were Japanese, 11 were other Asians, and seven had unknown nationalities. The participants were majoring in literature, economics, business administration, law, tourism, and welfare and community services. The students had at least six years of

formal English education at their junior and high schools prior to entering this university. The precise levels of the students' English proficiency were not measured; however, because the university is acknowledged to be a prestigious university, their proficiency levels were in the higher range in Japan.

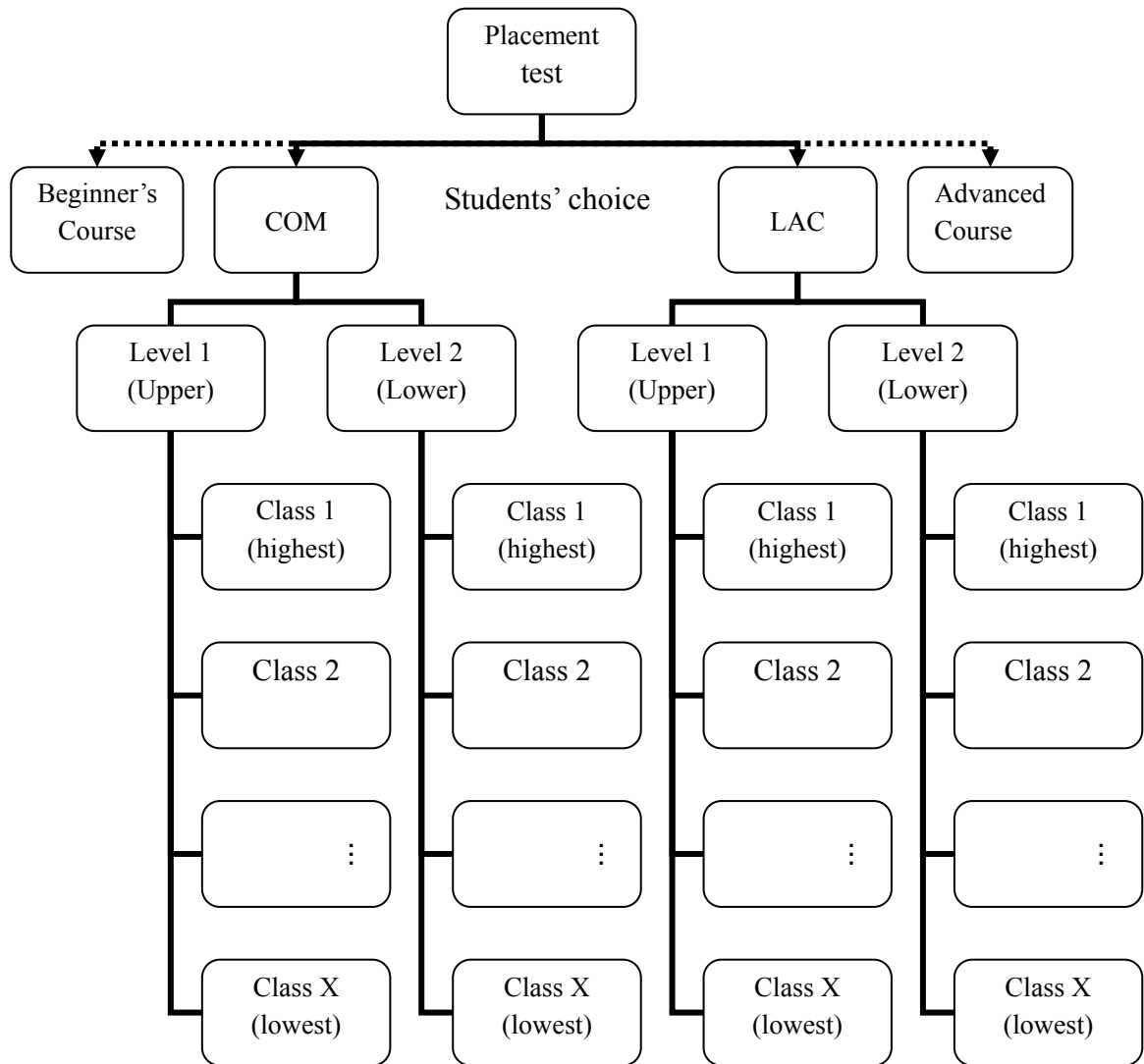
At the beginning of each questionnaire, the participants were informed of the purpose of the questionnaire, told that their participation in the study was voluntary, and informed that the results would only be used for research purposes. The participants were also assured that their responses to the questionnaires would not affect their course grades (see Appendices A, B, C, D, and E for the written instruction).

#### *Research Site and English Courses*

This study was conducted at two campuses of a large, prestigious, private university in the metropolitan Tokyo area. The first-year students were placed into two levels (Level 1 and Level 2) depending on their performance on the placement test administered by the university at the beginning of April. Students who scored exceptionally high on the placement test were exempted from the freshman English courses though they had the option of enrolling in them if they liked. The remaining students chose either the Language and Culture course (LAC) or the Communication course (COM), and as part of their chosen course, took four English lessons a week throughout the academic year.

The LAC course and the COM course were designed to provide different types of English instruction, with the LAC course focused on developing receptive skills, and the COM focused on developing productive skills. The core course of the LAC track was a listening and reading course that met twice a week for the entire academic year. The other courses were the extensive reading course, the video English course, cultural understanding course, and practical writing course. The students took two of them depending on their majors. The main course of the COM track was an oral communication course, which was also held twice a week for two semesters. The other courses were the listening course and the reading and writing course. All the students in the COM track took the same courses, but the level differed. This school employed a two semester system; therefore, the students took different subjects in the spring and fall semesters that were taught by different instructors. The extensive reading course, the video English course, and the practical writing course lasted one semester. The listening and reading course, the oral communication course, the listening course, and the reading and writing course lasted for one year, but the fall semester course was more difficult than the spring semester, and taught by different instructors; therefore, the spring semester course and the fall semester course were viewed as different courses. The cultural understanding course and the reading and writing course each used the same textbook in the spring and the fall semester. However, in this course, too, the students were taught by different instructors in the spring and the fall semester. All the English

classes were supposed to be taught in English regardless of the nationality of the instructor. Figure 3 summarizes the courses and the placement process at this university.



*Figure 3.* The courses and the screening process. The beginners' course was for international students who had received little or no English education in their home countries. The advanced course (optional) was for students who did exceptionally well on the placement test and thus were exempted from taking the Communication or Language and Culture course.

### *Research Period*

The data were collected in the spring semester, 2005. The first questionnaire was administered in the first lesson (April 2005) and the second questionnaire was administered in July 2005, toward the end of the semester.

### Materials

#### *Questionnaire 1*

Questionnaire 1 consisted of eight parts (see below) with 98 5-point Likert scale items (1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree). Participants were asked to provide information about their major, the class in which the questionnaire was administered, gender, age, and nationality, but they were not asked to provide any information that might identify them (such as names and student numbers). The Japanese questionnaire and its English translation are provided in Appendices A and B, respectively. The eight parts of Questionnaire 1 are as follows:

- Part A: Communication Apprehension in Group Work in English Classrooms (12 items)
- Part B: Self-perceived Communicative Competence in English Classrooms (12 items. This part was piloted in this administration.)
- Part C: Beliefs about the Value of Cooperation (13 items)
- Part D: Beliefs about the Efficiency of Group Work (13 items)

Part E: Beliefs about Knowledge Co-construction/Peer-scaffolding in Group Work (13 items)

Part F: Beliefs about Relationships with Other Group Members (12 items)

Part G: Beliefs about Teacher/Student Roles in College English Classrooms (12 items)

Part H: Willingness to Communicate in L2 Group Work (12 items. This part was piloted in this administration.)

### *The Development of Questionnaire 1*

Questionnaire 1 was a modification of the questionnaires that I used in my previous studies (Fushino, 2004, 2005a, 2005b). However, previous versions did not include Parts B and H. In the questionnaire used in a previous study (Fushino, 2005b), I modified six items from the Personal Report of Communication Apprehension (PRCA-24, McCroskey & Richmond, 1982), and wrote six new items for Part A (Communication Apprehension in L2 Group Work). I also found questionnaires related to student perceptions of group work or CL group work (cf. Ghaith, 2002, 2004; Johnson & Johnson, 1983; Johnson et al., 1983; Yasunaga et al., 1998). However, none of them were appropriate for this study, which is focused on L2 group work. Therefore, I wrote all the other items in each part based on relevant research and theories of cooperative learning (e.g., Johnson & Johnson, 1999a, Jacobs et al., 2002), sociocultural theory (e.g., Lantolf, 1994, 2000), situated cognition theory (Lave & Wenger, 1991), books related to questionnaire construction



(Brown, 2001; Dörnyei, 2003b), and my previous experiences as a classroom teacher using CL. I also consulted a CL specialist when writing Questionnaire 1. The reliability (Cronbach's  $\alpha$ ) of each part of the pilot study was as follows (Fushino, 2006b): Part A (Communication Apprehension in Group Work), .88; Part B (Beliefs about Value of Cooperation), .85; Part C (Beliefs about Efficiency of Group Work), .80; Part D (Beliefs about Academic Growth in Group Work), .79; Part E (Beliefs about Relationship with Other Members), .61; Part F (Beliefs about Teacher/Student Roles in College Classrooms), .74.

Although the reliability of each part was satisfactorily high in the pilot study except for Part E, the results of the factor analysis were unsatisfactory because many items, especially in Parts D and E, did not load on the expected factors. Items that did not load above .32 were discarded, and items that loaded above .32 on the same factor were used for Questionnaire 1 in this study. In addition, 24 new items were added, and the wordings of 14 items were slightly modified (see Appendix B).

Parts B and H in Questionnaire 1 were newly written for this study based on previous studies of perceived communicative competence in L2 and willingness to communicate in an L2 and questionnaires designed to measure perceived communicative competence (McCroskey & Richmond, 1982) and willingness to communicate (MacIntyre, Baker, Clément, & Conrod, 2001; Sick & Nagasaka, 2000; Yashima, 2002). However, because this study was focused on L2 group work, none of the questionnaires were suitable for this study. Therefore, I wrote all the items for Parts B and H in

consultation with a CL specialist and with the knowledge that I gained from my previous observations of L2 group work. These two parts of the questionnaire were piloted in the first administration, and Cronbach's alpha for each part was calculated and will be reported in Chapter 5.

Because of time constraints, the new version of Questionnaire 1 could not be piloted before the actual administration. Instead, I sought opinions from a CL specialist and one of my previous university students (a sophomore at that time) to determine whether any parts were missing important items or if there were any items that the students would not comprehend easily. Their suggestions were incorporated and Questionnaire 1 was revised accordingly.

### *Questionnaire 2*

The purpose of Questionnaire 2 was to determine how student perceptions of the above eight constructs changed after they experienced their first semester at the university. The second questionnaire was made up of 64 5-point Likert scale items. Thirty-five items were deleted from Questionnaire 1 based on the results of the factor analysis obtained for Questionnaire 1. Only items that loaded above .45 on the factors in the factor solution were included. Also the parts were rearranged and the number of parts was reduced to six based on the factors identified in the factor analysis for Questionnaire 1. The number of items and parts was reduced in order to lighten the burden on the teachers administering the questionnaire.

As mentioned above, many of the questionnaire items were derived from principles of cooperative learning. For example, all the items in Part C were written based on the principles of the value of cooperation (Jacobs, et al. 2002). Item 5 (During group work I learn various opinions and ideas from group members), Item 11 (Students who help other group members learn well), and Item 16 (I will willingly help other members in group work) in Part E are three examples of the principle of positive interdependence. Item 9 (If I present a different view from theirs, my group members will listen to it) and Item 20 (After a conflict with my group member, I can fix the relationship with her/him) in Part E are two examples of the principle of social skills. The Japanese version of Questionnaire 2 and the English translation of the items are provided in Appendices C (Japanese for the COM students), D (English), E (Japanese, the front page of the questionnaire for the LAC students), and F (English, the front page of the questionnaire for the LAC students).

The participants were informed in writing of the purpose of the questionnaire, told that their participation in the study was voluntary, and informed that the results would only be used for research purposes at the beginning of the questionnaire. The participants were also assured that their responses to the questionnaires would not affect their course grades (see Appendices C, D, E, and F for the written instruction). In order to avoid mishandling of the collected questionnaire sheets, the students were once again asked to provide information about their major, the class where the questionnaire was administered, gender, age, and nationality. They were not asked to provide any information that would identify them (such as names and student numbers).

Another important change was the addition of a section asking the students what percentage of class time was being used for group work in the four English classes that they took in the spring semester. Students were asked to choose 1 (0%), 2 (1-20%), 3 (21-40%), 4 (41-60%), 5 (61-80%), or 6 (more than 80%). This was a subjective measure; however, because it was impossible to visit all the classes and determine how many minutes were spent for group work, this method was selected as a way to estimate the amount of time used for group work. Johnson and Johnson (1983) used the same method to estimate the amount of time spent for cooperative group work. This part was added in order to gather data on determine whether the two courses (LAC and COM) differed in the amount of group work. These data were used to interpret changes in the participants' *Readiness for L2 Group Work* due to the course.

In addition, the wording of the original Part H in Questionnaire 1 was changed from “*shitai* (want to)” to “*suru tsumorida* (be willing to)” to more precisely reflect students' *Willingness to Communicate in L2 Group Work*. This change of wording occurred due to the planned use of this part of Questionnaire 1 as a pilot because this part was a new addition to the questionnaire, and thus was not included in the previous versions of the questionnaire. In Japanese, these two expressions are not as distinctively different in meaning as the corresponding expressions in English. However, the meaning of *shitai* ranges from something close to “be willing to” to something that means “want”, “hope”, and “wish”. Therefore, this wording allowed each respondent to interpret the phrase

differently. In order to avoid ambiguity, the expression *shitai* was changed to *suru tsumorida* in Questionnaire 2.

The *want to* version and the *willing to* version of Part F of Questionnaire 2 were administered to 33 students in one COM course class. The reliability of the *want to* version was  $\alpha = .89$ , and that of the *willing to* version was  $\alpha = .93$ . Therefore, I decided to use the *willing to* version in Questionnaire 2 (see Chapter 5 for a more detailed description of this procedure). However, because of the change of wording, a direct comparison of the Questionnaire 1 and Questionnaire 2 responses regarding *Willingness to Communicate in L2 Group Work* must be made cautiously.

I also piloted the question asking what percentage of class time was being used for group work (including pair work) with the same students described above in order to determine whether the format was easily understood by the students. It was found that about 10 students left some of the parts unanswered. Therefore, the layout was modified so that it would be less confusing (See Appendices C and E for the modified versions of Questionnaire 2 for the COM and the LAC students, respectively).

### Procedures

Eight colleagues were initially asked to administer the questionnaire in their classes. Therefore, the selection of participants was based on convenience. However, at this university, teachers are randomly assigned to classes, and these eight teachers taught only one or two classes among the four classes that the students took. Hence, it seemed

unlikely that this convenience sample would distort the results of the study. The course/teacher list distributed by the university was used to select the classes so that a balanced design could be used when comparing group means.

### *Questionnaire Administrations*

The Japanese version of Questionnaire 1 was administered in April, 2005, at the beginning of the spring semester, and Questionnaire 2 was administered in July, 2005, at the end of the spring semester. Clearly written instructions (both Japanese and English) regarding how to administer the questionnaire were distributed to the collaborating teachers for each administration (See Appendices G and H).

### *Questionnaire 1 Administration*

All of the teachers except one administered Questionnaire 1 in class at the beginning of spring semester, 2005. One teacher asked the students to complete the questionnaire at home because of time constraints. It took the students approximately ten minutes to complete the questionnaire. Twenty-eight students failed to respond to at least one entire part of the questionnaire, and they were eliminated from the analyses.

### *Questionnaire 2 Administration*

The second questionnaire was administered in class at the end of the spring semester, 2005 in the same classes as those that participated in the first administration. All but one teacher, who allowed the students to complete the questionnaire at home, administered it in class. Thirteen students failed to respond to at least one entire part of the questionnaire, and they were eliminated from the analyses.

## CHAPTER 5

### PRELIMINARY ANALYSES

#### Validity and Reliability of Questionnaires 1 and 2

Before investigating research questions 1 to 5, the validity and reliability of Questionnaires 1 and 2 were examined.

#### *Questionnaire 1*

Factor analyses were conducted in order to validate the questionnaires. Factor analysis requires meeting the following six assumptions: no univariate or multivariate outliers, large sample size, factorability of  $R$ , normality and linearity of variables, and the absence of multicollinearity and singularity (Tabachnick & Fidell, 2001). I will report how each of the above assumptions was checked and the Cronbach  $\alpha$  internal reliabilities for both Questionnaires 1 and 2.

#### *Assumptions of Factor Analysis*

*Data screening.* Questionnaire 1 consisted of eight sections and 98 items. Seven hundred and seventy-two students responded to the questionnaire, but 28 students did not answer at least one section, so those students were excluded from further analysis. This reduced the  $N$ -size to 744. Some of the students did not respond to some of the items;



however, the ratio of missing data for each item was less than 1%, and no pattern of missing data was detected; thus, the missing data were estimated with the item mean.

*Outliers.* Descriptive statistics for each questionnaire item were calculated in order to detect univariate outliers. Brown (1997) suggested that if kurtosis or skewness exceeds two times the absolute value of the standard error of skewness/kurtosis, normality of the data is problematic. However, because of the large *N*-size in this study, the shape of the distribution is more important than the value itself (Field, 2005; Tabachnick & Fidell, 2001). Therefore, even though many of the kurtosis and skewness statistics exceeded two times the absolute value of the standard error of skewness/kurtosis, the normality of the data was not considered problematic because the histograms for the majority of the items appeared normal. However, the histograms of items C1, C3, and F5 were extremely negatively skewed. Therefore, the raw scores for these items were transformed to standardized *z*-scores. Sixteen cases were identified as univariate outliers with a *z*-score of  $> |3.29|$ . They were deleted, reducing the *N*-size to 728. Descriptive statistics were calculated with the 728 cases again, and the histogram showed that item B6R was extremely positively skewed. Four univariate outliers for item B6R were identified and eliminated from the analysis, leaving an *N*-size of 724.

Next, multivariate outliers were identified with linear regression using a serial number as a dummy independent variable in order to obtain Mahalanobis distances. The alpha level was set at .001. Because there were 98 items in Questionnaire 1, cases with

Mahalanobis distances greater than 137.208 were considered multivariate outliers (Tabachnick & Fidell, 2001). Ninety-five cases were identified as multivariate outliers, and they were excluded from the analysis. This reduced the sample size to 629.

*Normality.* In order to check the normality of the data, descriptive statistics were calculated once more. No further outliers were detected. Once again, histograms were checked for all items. Some of the histograms indicated the existence of ceiling effects. However, because it is not unusual for many respondents to strongly agree with certain items and because the same items were to be used before and after the course, a ceiling effect with an item on Questionnaire 1 was not necessarily a predictor of a ceiling effect on the same item on Questionnaire 2. Therefore, all items were retained at this point.

*Linearity.* Linearity among pairs of variables was assessed through an examination of the scatterplots. Because it was not practical to check all 98 variables, a spot check was conducted with 22 randomly selected combinations. No curvilinear relationships were identified. In addition, because multivariate outliers had already been eliminated, multivariate normality, which suggests linearity among pairs of variables, was not a problem. Therefore, linearity was further assured.

*Sample size.* The sample size of 629 (after excluding univariate and multivariate outliers) is adequate for conducting a factor analysis (Tabachnick & Fidell, 2001).

*Factorability of R.* Factorability of R was checked by examining Kaiser's measure of sampling adequacy. SPSS principal component analysis yielded a Kaiser value of .95, which was greater than the critical value of .60 (Tabachnick & Fidell, 2001). Therefore, the assumption of the factorability of R was met.

*Absence of multicollinearity and singularity.* Muticollinearity occurs when variables are too highly correlated with each other ( $r > .90$ ) and singularity happens when variables are perfectly correlated with each other ( $r = 1.00$ ). Such variables are considered redundant. In order to detect multicollinearity and singularity, SPSS Regression Collinearity Diagnostics were performed. According to Tabachnick and Fidell (2001, p. 85), when a conditioning index is greater than 30 for a given dimension and at least two variance proportions for an individual variable exceed .50, multicollinearity is detected. The condition index of the data was 14.62, which is far below 30. Therefore, although two variables exceeded .50 in two dimensions (dimensions 98 and 99), this was not interpreted as an indication of mutlicollinearity.

### *Factor Analysis*

Generalized least square extraction with promax rotation was performed through SPSS FACTOR on 98 items from Questionnaire 1 for a sample of 629 students. Prior to running the generalized least square extraction, principal components extraction was used to estimate the number of factors. Principal components analysis extracted 19

components with eigenvalues larger than 1. Three criteria were used to determine the number of factors to rotate: (a) the a priori hypothesis that the questionnaire measures eight factors, (b) the scree test, and (c) the interpretability of the factor solution. The examination of the screeplot suggested a five or six factor solution. That is, although items in the Communication Apprehension in L2 Group Work (Part A), Self-perceived Communicative Competence (Part B), and Willingness to Communicate in L2 Group Work (Part H) Sections loaded strongly on three factors (Factors 4, 3, and 2, respectively), the Beliefs about L2 Group Work part of the questionnaire, which I originally hypothesized would measure five constructs, did not load clearly on five factors. Many of the items in the belief parts loaded strongly on factors 1, 5, and 6. Therefore, a six factor solution was selected. These six factors accounted for 43.88% of the total variance.

Based on this decision, a generalized least square factor analysis extracting six factors with promax rotation was performed. As shown in Table 2, 73% (11 combinations) of all the combinations correlated above .32, which Tabachnick and Fidell (2001, p. 622) state warrant oblique rotation. Promax rotation is one kind of oblique rotation in which orthogonal factor loadings are initially obtained, and then they are raised to powers (mostly to powers of 2, 4, or 6) to make a hypothetical factor matrix. After that, the solution is rotated again to oblique positions in order to maximize simple structure, that is, to make high loadings even higher and low loadings even lower (Gorsuch, 1983; Tabachnick & Fidell, 2001). In this study, the purpose of the factor analysis was to obtain simple structure; therefore, promax rotation was chosen.

Table 2. *Factor Correlation Matrix*

Factor	1	2	3	4	5	6
1	-					
2	.57	-				
3	.27	.45	-			
4	.33	.36	.40	-		
5	.45	.41	.15	.22	-	
6	.65	.58	.29	.33	.42	-

*Note.* Extraction Method: Generalized Least Squares. Rotation Method: Promax with Kaiser Normalization.

Table 3 shows the pattern matrix in descending order. Factor loadings greater than .45 are indicated in bold. Field (2005) recommends interpreting items with factor loadings of greater than .21 with an *N*-size of 600, and Stevens (1992) suggests .40 or greater as a thumb of rule regardless of the *N*-size. However, a conservative loading of .45 or greater was chosen as a selection criterion in order to ensure that the retained items adequately represented the constructs that they were believed to measure.

As can be seen from Table 3, many items from Parts E and F loaded (> .45) on factor 1. Six items from Part G and two items from Part D loaded on factor 5, and six items from Part C loaded on factor 6.

Table 3. *Pattern Matrix for the 98 Items on Questionnaire 1*

Item	Factors						$h^2$
	1	2	3	4	5	6	
Part F-3	<b>.84</b>	-.01	-.01	.16	-.11	-.19	.76
Part E-9	<b>.76</b>	-.12	-.11	-.03	.01	-.09	.64
Part F-2	<b>.74</b>	.00	-.10	.19	-.01	-.06	.70
Part F-4	<b>.73</b>	.05	.04	.13	-.09	-.04	.78
Part E-10	<b>.73</b>	.05	.02	.13	-.05	-.20	.67
Part F-1	<b>.69</b>	.02	.05	-.09	.06	.01	.69
Part E-12	<b>.63</b>	.05	-.04	.01	.06	.10	.74
Part F-7	<b>.63</b>	.08	-.04	.20	-.11	.03	.78
Part E-4	<b>.63</b>	.01	.05	-.12	.15	-.06	.64
Part E-6	<b>.62</b>	.00	.00	-.11	.12	.16	.76
Part F-5	<b>.61</b>	.07	.04	.01	.07	.03	.72
Part E-5	<b>.61</b>	.05	.11	-.21	-.04	-.04	.64
Part F-10	<b>.61</b>	.04	.02	.20	-.20	-.03	.67
Part E-8	<b>.59</b>	.01	.03	-.11	.13	.09	.69
Part E-3	<b>.57</b>	-.02	.09	-.14	-.09	.08	.62
Part E-11	<b>.56</b>	.09	-.02	.06	-.13	.07	.63
Part F-5	<b>.61</b>	.07	.04	.01	.07	.03	.72
Part E-5	<b>.61</b>	.05	.11	-.21	-.04	-.04	.64
Part F-10	<b>.61</b>	.04	.02	.20	-.20	-.03	.67
Part E-8	<b>.59</b>	.01	.03	-.11	.13	.09	.69
Part E-3	<b>.57</b>	-.02	.09	-.14	-.09	.08	.62
Part E-11	<b>.56</b>	.09	-.02	.06	-.13	.07	.63
Part D-9	<b>.52</b>	-.08	-.01	.03	.13	.11	.70
Part E-1	<b>.51</b>	.10	.03	-.23	.03	-.13	.57
Part E-7	<b>.51</b>	.07	.04	.04	.04	-.01	.61
Part E-13	<b>.49</b>	.08	.06	-.09	-.12	.04	.61
Part C-6	<b>.48</b>	-.07	-.08	-.03	.00	-.06	.62
Part C-5	<b>.48</b>	-.06	-.11	.09	.03	.12	.58
Part E-2	<b>.47</b>	.07	.08	-.10	.10	-.01	.56
Part D-7	<b>.46</b>	-.10	-.11	.21	.10	.03	.60
Part F-8	<b>.45</b>	.06	.00	-.14	-.04	.19	.59
Part C-8	<b>.45</b>	.04	-.02	.09	-.13	.11	.61
Part H-3	.09	<b>.99</b>	.01	-.06	-.02	-.20	.91
Part H-2	.10	<b>.97</b>	.00	-.10	-.02	-.19	.90
Part H-7	.02	<b>.94</b>	-.06	.00	-.02	-.07	.85
Part H-5	-.01	<b>.92</b>	-.05	-.04	.06	-.02	.86
Part H-12	-.02	<b>.86</b>	-.07	.07	-.07	.05	.86

Table 3 continues

Table 3. (continued)

Item	Factors						$h^2$
	1	2	3	4	5	6	
Part H-9	-.13	<b>.77</b>	-.02	.05	-.02	.04	.72
Part H-11	-.01	<b>.77</b>	-.08	.09	-.07	.13	.86
Part H-4	.06	<b>.64</b>	-.03	.00	.15	.09	.78
Part H-8	.10	<b>.64</b>	.03	-.06	.04	.05	.75
Part H-1	.02	<b>.63</b>	.13	-.10	.14	.01	.71
Part B-1	.02	-.05	<b>.79</b>	.00	.09	-.12	.76
Part B-3	.08	.00	<b>.78</b>	-.04	.05	-.09	.75
Part B-5	.07	-.09	<b>.78</b>	.03	.08	-.08	.71
Part B-2	.06	.08	<b>.77</b>	-.07	.02	-.10	.79
Part B-7	-.01	-.02	<b>.74</b>	.06	.05	-.04	.69
Part B-9	-.14	-.01	<b>.68</b>	.12	-.17	.03	.71
Part B-11	.07	-.02	<b>.66</b>	.13	-.08	.05	.79
Part B-12	.05	-.06	<b>.64</b>	.14	-.13	.08	.77
Part B-4	.08	.01	<b>.56</b>	-.08	.11	-.05	.52
Part B-8	.12	-.02	<b>.50</b>	-.04	.10	.06	.56
Part B-10	-.13	.01	<b>.50</b>	.36	-.17	.13	.77
Part A-6	.02	.07	.02	<b>-.75</b>	-.04	.06	.70
Part A-11	.07	.09	-.12	<b>-.74</b>	.02	.08	.78
Part A-3	-.11	.08	-.01	<b>-.69</b>	-.05	.01	.74
Part A-7	-.09	-.04	.09	<b>-.66</b>	-.22	-.04	.77
Part A-12	.03	-.05	-.13	<b>-.63</b>	-.04	.05	.70
Part A-9	-.03	-.03	.06	<b>-.62</b>	-.23	-.14	.81
Part A-2R	-.14	.05	-.02	<b>-.60</b>	.00	-.05	.72
Part A-5	-.04	-.04	-.02	<b>-.59</b>	-.03	.01	.59
Part A-10	.06	.01	-.04	<b>-.53</b>	-.08	.04	.61
Part A-8	.25	-.02	-.23	<b>-.45</b>	-.15	.02	.62
Part G-3R	-.10	.00	.06	.01	<b>.78</b>	.09	.81
Part G-2R	-.07	-.01	.05	.05	<b>.75</b>	.12	.76
Part G-1R	-.05	-.01	.01	.17	<b>.69</b>	.00	.70
Part D-6R	-.07	.04	-.09	.24	<b>.67</b>	-.23	.78
Part D-3R	-.03	-.05	-.15	.24	<b>.66</b>	-.17	.79
Part G-6R	-.03	-.02	.07	-.08	<b>.64</b>	-.01	.69
Part G-4R	.00	.08	.14	.02	<b>.62</b>	-.02	.71
Part G-7R	.14	.05	-.02	.11	<b>.54</b>	.11	.71
Part C-3	-.02	-.07	-.03	-.02	-.01	<b>.91</b>	.85
Part C-2	.06	-.10	-.02	.01	.00	<b>.88</b>	.86
Part C-11	.15	.07	-.15	.02	-.11	<b>.65</b>	.76
Part C-10	.29	.01	-.10	.03	.00	<b>.58</b>	.79

Table 3 continues

Table 3. (continued)

Item	Factors						$h^2$
	1	2	3	4	5	6	
Part C-12	.18	.14	-.07	-.05	.07	<b>.54</b>	.73
Part C-13	.20	.12	-.13	.09	-.03	<b>.48</b>	.72
Part A-1	.03	-.22	.02	-.40	-.19	-.05	.65
Part A-4R	-.07	-.17	-.09	-.39	-.04	-.13	.66
Part B-6R	-.23	.04	.35	.14	-.04	.02	.52
Part C-1	.33	-.01	.04	-.10	.04	.25	.56
Part C-4	.43	-.14	-.11	.06	.08	.27	.61
Part C-7	.38	.03	-.04	-.03	-.10	.12	.46
Part C-9	.32	-.01	.06	-.16	.00	.33	.62
Part D-1	-.03	-.01	.15	.27	-.20	.31	.74
Part D-2	.28	.06	.20	-.07	-.04	.20	.71
Part D-4	-.11	-.01	.06	.21	-.38	.32	.70
Part D-5	.40	.03	.15	-.06	.02	.06	.72
Part D-8	.40	-.05	.09	-.01	.18	.13	.64
Part D-10	.39	-.07	.05	.29	.02	.04	.64
Part D-11	.32	-.01	.17	.37	-.01	.07	.70
Part D-12R	.14	-.01	-.18	.22	.16	-.09	.48
Part F-9	.20	.02	.11	-.20	-.01	.27	.57
Part F-11R	.30	-.09	-.01	.25	.12	-.21	.48
Part F-12R	-.10	.04	.27	.27	.07	-.11	.51
Part G-5	.02	.06	.03	.01	.25	.15	.52
Part G-8	.07	.15	.15	-.07	.17	.22	.64
Part G-9	.07	.16	.19	-.07	.14	.16	.65
Part G-10	.14	.03	.09	-.08	.02	-.03	.35
Part G-12	.20	.06	.05	-.15	.14	.21	.51
Part G-11R	.16	.09	-.01	-.03	.37	.11	.60
Part H-6R	-.36	.32	.07	.22	.04	.08	.58
Part H-10	-.16	.42	.13	.31	-.22	.08	.65

*Note.* A R after an item number indicates that the item was reverse coded.

One purpose of this factor analysis was to select items for Questionnaire 2. The reduction of the number of items on Questionnaire 2 was necessary to (a) make the questionnaire shorter and reduce administration time, and (b) retain only items with high loadings. Therefore, based on the results, decisions were made as to which items to keep



for Questionnaire 2. First, items with factor loadings less than .45 were dropped. Then, because many of the items loading on factor 1 were from Parts E and F, only items from these parts were retained and they were combined to form a new part. In order to make Questionnaire 2 shorter, the number of items in this new part was reduced to 20 items. Because Parts B and H were paired, that is, the same situations were presented in both parts, an equal number of items in the two parts was selected (10 items each). Parts D and G were combined to make a new part because the items in these two parts loaded on factor 5.

The following items were excluded from further analyses: items 1 and 4 from Part A; items 6 and 10 from Part B; items 1, 4, 5, 6, 7, 8, and 9 from Part C; items 1, 2, 4, 5, 7, 8, 9, 10, 11, and 12 from Part D; item 2 from Part E; items 8, 9, 11, and 12 from Part F; items 5, 8, 9, 10, 11, and 12 from Part G; and items 6 and 10 from Part H. A total of 34 items were excluded, and 64 items were retained for further analysis and for use on Questionnaire 2.

A generalized least square factor analysis with promax rotation was performed again with the retained 64 items and the results shown in Table 4 were obtained. Note that the percent of variance and percent of covariance are not reported because proportions of variance and covariance cannot be specified after oblique rotation (Tabachnick & Fidell, 2001, pp. 624-625).

Table 4. *Pattern Matrix for the 64 Items on Questionnaire 1*

Item	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part F-3:</b> Group members will be willing to help me in group work.	<b>.84</b>	-.04	-.01	-.14	-.08	-.15	.71
<b>Part F-2:</b> Group work enables me to like my group members more.	<b>.75</b>	-.03	-.10	-.15	.01	-.03	.68
<b>Part E-9:</b> Conclusions reached through group discussion are better than when I think alone.	<b>.75</b>	-.16	-.10	.07	.05	-.04	.58
<b>Part E-10:</b> If I present a different view from theirs, my group members will listen to it.	<b>.74</b>	.02	.00	-.12	-.02	-.16	.62
<b>Part F-4:</b> I will willingly help other group members in group work.	<b>.73</b>	.03	.03	-.12	-.07	-.02	.73
<b>Part F-6:</b> Even if there is a conflict, we can resolve it by working together.	<b>.73</b>	.04	-.01	-.19	-.21	-.09	.69
<b>Part F-1:</b> I can learn from other group members.	<b>.71</b>	-.01	.04	.11	.09	.02	.62
<b>Part F-7:</b> After some argument in group work, we can become better friends.	<b>.66</b>	.05	-.04	-.17	-.07	.03	.73
<b>Part E-4:</b> While discussing with my group members, I can find answers to the questions that I couldn't answer on my own.	<b>.63</b>	-.01	.04	.15	.18	-.04	.60
<b>Part E-12:</b> Students who help other group members learn well.	<b>.63</b>	.02	-.03	.01	.09	.11	.70
<b>Part F-10:</b> After a conflict with my group member, I can fix the relationship with her/him.	<b>.63</b>	.01	.02	-.18	-.17	-.02	.61
<b>Part F-5:</b> By working together in group work, we can better understand each other.	<b>.62</b>	.05	.04	.01	.09	.04	.67
<b>Part E-6:</b> During group work I learn various opinions and ideas from group members.	<b>.62</b>	-.02	.01	.14	.14	.18	.74
<b>Part E-5:</b> Whether or not I speak in group work, I listen carefully to what my group members are saying.	<b>.60</b>	.02	.11	.21	-.03	.00	.58
<b>Part E-8:</b> When we work together in group, we can find something that we often overlook when working alone.	<b>.60</b>	-.01	.02	.13	.14	.09	.66
<b>Part E-11:</b> After working in group, I will eventually be able to do things on my own that I can't do alone now.	<b>.55</b>	.07	-.02	-.04	-.10	.08	.56
<b>Part E-3:</b> By listening attentively, we can help other members notice something new.	<b>.54</b>	-.02	.08	.14	-.07	.09	.51
<b>Part E-7:</b> I will be willing to listen to my group members if they point out my mistakes.	<b>.53</b>	.04	.04	-.03	.04	.01	.55

Table 4 continues

Table 4. (continued)

Item	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part E-1:</b> While listening to other members discuss, I will notice my mistakes.	<b>.52</b>	.07	.01	.26	.08	-.13	.53
<b>Part E-13:</b> When I talk to groupmates, I will notice my mistakes.	<b>.52</b>	.05	.05	.10	-.07	.01	.54
<b>Part H-3:</b> I want to ask questions in English if a group member says something unclear to me.	.04	<b>.97</b>	.03	.03	-.04	-.15	.89
<b>Part H-2:</b> If I need a help from my group members, I want to ask them in English.	.05	<b>.96</b>	.01	.07	-.03	-.14	.89
<b>Part H-7:</b> If I have a different idea or opinion from group members, I want to say it in English.	.01	<b>.93</b>	-.04	-.02	-.03	-.05	.84
<b>Part H-5:</b> I want show empathy or my feelings to my group members in English.	-.03	<b>.91</b>	-.03	.04	.06	-.01	.85
<b>Part H-12:</b> If a conflict arises during group work, I want to find a way to resolve it in English.	-.02	<b>.85</b>	-.05	-.08	-.07	.04	.86
<b>Part H-11:</b> I want to make a plan for group project in English with group members.	-.01	<b>.77</b>	-.06	-.08	-.07	.11	.85
<b>Part H-9:</b> I want to express complex ideas in English.	-.11	<b>.76</b>	-.02	-.08	-.05	.03	.66
<b>Part H-8:</b> I want to convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.	.06	<b>.64</b>	.05	.04	.02	.09	.70
<b>Part H-4:</b> I want to do group work in English if the task is simple.	.02	<b>.63</b>	.00	.01	.14	.12	.76
<b>Part H-1:</b> If my group members ask me questions in English, I want to answer them in English.	.00	<b>.63</b>	.13	.06	.10	.04	.67
<b>Part B-5:</b> I can show empathy or my feelings to my group members in English.	.05	-.08	<b>.78</b>	-.02	.07	-.04	.68
<b>Part B-1:</b> If my group members ask me questions in English, I can answer them in English.	-.03	-.03	<b>.78</b>	-.02	.06	-.06	.72
<b>Part B-3:</b> I can ask questions in English if a group member says something unclear to me.	.04	.03	<b>.77</b>	.02	.01	-.04	.71
<b>Part B-2:</b> If I need help from my group members, I can ask them in English.	.01	.10	<b>.76</b>	.06	-.01	-.04	.73
<b>Part B-7:</b> If I have a different idea or opinion from group members, I can say it in English.	-.04	.00	<b>.74</b>	-.06	.02	.01	.67
<b>Part B-11:</b> I can make a plan for group project in English with group members.	.08	-.01	<b>.66</b>	-.10	-.08	.06	.76
<b>Part B-12:</b> If a conflict arises during group work, I can find a way to resolve it in English.	.06	-.06	<b>.66</b>	-.12	-.13	.10	.74

Table 4 continues

Table 4. (continued)

Item	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part B-9:</b> I can express complex ideas in English.	-.13	.02	<b>.65</b>	-.11	-.16	.01	.59
<b>Part B-4:</b> I can do group work in English if the task is simple.	.03	.03	<b>.56</b>	.06	.09	.00	.46
<b>Part B-8:</b> I can convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.	.07	-.01	<b>.51</b>	.03	.07	.10	.50
<b>Part A-6:</b> I feel nervous when I work in a group in English class.	.05	.03	.04	<b>.79</b>	-.01	.04	.67
<b>Part A-11:</b> When working in group, I feel nervous if I am asked a question by other members.	.08	.05	-.10	<b>.78</b>	.06	.06	.76
<b>Part A-3:</b> I feel uneasy when I do group work in English class.	-.09	.06	-.01	<b>.69</b>	-.02	-.02	.71
<b>Part A-12:</b> In group work, I can't ask questions to other members because I feel embarrassed.	.03	-.08	-.12	<b>.67</b>	.00	.03	.66
<b>Part A-7:</b> Group work in English class is painful for me.	-.08	-.05	.08	<b>.62</b>	-.21	-.06	.74
<b>Part A-2R:</b> I feel relaxed when I work in a group in English class.	-.10	.02	-.02	<b>.62</b>	.03	-.09	.69
<b>Part A-9:</b> I want to avoid group work as much as possible in English class.	-.03	-.04	.04	<b>.58</b>	-.22	-.15	.77
<b>Part A-10:</b> If other members say different opinions from mine, I will be nervous.	.04	-.01	-.02	<b>.58</b>	-.04	.03	.56
<b>Part A-5:</b> I feel anxious when I work in English class in a group with classmates who I don't know well.	-.04	-.05	-.01	<b>.57</b>	-.02	.00	.49
<b>Part A-8:</b> In group work in English class, I feel more comfortable when listening to other members' opinions than talking to group members.	.23	-.05	-.20	<b>.46</b>	-.12	.03	.48
<b>Part G-3R:</b> The teacher is the only one who should convey knowledge to students.	-.04	.00	.04	.05	<b>.80</b>	.03	.80
<b>Part G-2R:</b> 100% teacher-led classes are more suitable for college education than classes that combine teacher lecture and group work.	-.05	-.01	.04	.01	<b>.76</b>	.10	.73
<b>Part G-1R:</b> Lecture style should be employed in college English classes more often than group work.	-.04	-.01	.00	-.09	<b>.72</b>	.00	.68
<b>Part D-6R:</b> I learn efficiently in a teacher-led class that does not have group work.	-.07	.01	-.08	-.16	<b>.71</b>	-.18	.78

Table 4 continues

Table 4. (continued)

Item	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part D-3R:</b> I learn well in a teacher-led class that has no group work.	-.02	-.10	-.13	-.16	<b>.68</b>	-.11	.75
<b>Part G-6R:</b> The teacher is the only one who can provide right answers.	.04	-.01	.04	.10	<b>.62</b>	-.07	.61
<b>Part G-4R:</b> Students should speak only when they are called on by the teacher.	.06	.08	.10	.00	<b>.61</b>	-.07	.64
<b>Part G-7R:</b> Generally speaking, it is waste of time to do group work in English classes.	.14	.05	-.01	-.06	<b>.54</b>	.12	.67
<b>Part C-3:</b> Group work is important for human society.	-.12	-.05	.05	.01	-.06	<b>.99</b>	.83
<b>Part C-2:</b> Group work is important for human growth.	-.05	-.09	.06	-.02	-.05	<b>.97</b>	.85
<b>Part C-11:</b> Group work is valuable to facilitate students' autonomy.	.09	.08	-.09	-.01	-.12	<b>.67</b>	.71
<b>Part C-10:</b> Experience in the process of group work is valuable.	.23	.01	-.04	-.02	-.01	<b>.62</b>	.73
<b>Part C-12:</b> Communication skills developed in group work are useful for my future.	.13	.14	-.01	.06	.05	<b>.58</b>	.70
<b>Part C-13:</b> Group work is a good opportunity for me to understand myself better.	.18	.10	-.08	-.05	-.01	<b>.49</b>	.67

*Note.* R after the item number indicates the item was reverse coded when analyzed.

Table 5 shows the reliability of each factor and the items from Questionnaire 1 that were used on Questionnaire 2. All the Cronbach  $\alpha$  reliability estimates were satisfactorily high. The results show that all of the factors were internally consistent.

Table 5. Cronbach  $\alpha$  Reliabilities of the Six Factors Retained on Questionnaire 1

Factor	Reliability	Number of Items
1	.93	20
2	.95	10
3	.90	10
4	.89	10
5	.86	8
6	.90	6

*Naming the factors.* Factors were tentatively named based on the a priori hypotheses regarding the constructs measured by the questionnaire as well as characteristics of the items loading on each factor. The items in Factor 1 came from the original Part E (Beliefs about the Knowledge Co-Construction/Peer-Scaffolding in Group Work) and Part F (Beliefs about the Relationship with Other Group Members). Although the original two parts were written in order to measure different constructs, the items that loaded strongly on Factor 1 were related to beliefs about the usefulness of group work. Hence, this factor was named *Beliefs of Group Work Usefulness*. Note that many of the items that loaded on Factor 1 were related to cooperative learning principles, in particular, positive interdependence.

Next, the items that loaded strongly on Factor 2 were originally intended to measure students' willingness to communicate in L2 group work (although the word “*shitai*” was used). Therefore, this factor was named *Willingness to Communicate in L2 Group Work*.

All the items that were indicators of Factor 3 came from the original Part B that was designed to measure self-perceived communicative competence in L2 group work. Therefore, this factor was named *Self-perceived Communicative Competence in L2 Group Work*.

Factor 4 consisted of items from the original Part A (Communication Apprehension in L2 Group Work). Thus, it was named *Communication Apprehension in L2 Group Work*. Factor 5 was made up of two items from the original Part C (Beliefs about the Efficiency

of Group Work) and six items from the original Part G (Beliefs about Teacher/Student Roles in College English Classroom).

All the items in Factor 5 measured whether the students feel that traditional teacher-fronted instruction is superior to group work in college English classes. However, all the items in this factor were reverse coded when data were entered; therefore, a higher score indicates a more negative orientation and a lower score indicates a higher orientation toward traditional instruction. Because of this, this factor was named *Negative Traditional Instruction Orientation*.

All the items in Factor 6 came from the original Part C (Beliefs about the Value of Cooperation). These items were derived from the CL principle of the value of cooperation and measured the degree to which the students valued group work. Therefore, it was named *Positive Beliefs about the Value of Group Work*.

To summarize, the factor names are presented below:

Factor 1: Beliefs of Group Work Usefulness (BGWU)

Factor 2: Willingness to Communicate in L2 Group Work (WTC)

Factor 3: Self-perceived Communicative Competence in L2 Group Work (SPCC)

Factor 4: Communication Apprehension in L2 Group Work (CA)

Factor 5: Negative Traditional Instruction Orientation (NTIO)

Factor 6: Positive Beliefs about the Value of Group Work (PBVGW)

## *Questionnaire 2*

Questionnaire 2 was made up of 64 items that were selected based on the results of the factor analysis of the items on Questionnaire 1. The same procedures described above were taken in order to validate Questionnaire 2.

### *Checking the Want-Willing Change*

As stated above, the wording of the original part H in Questionnaire 1 was changed from “*shitai* (want to)” to “*suru tsumorida* (be willing to)” in Questionnaire 2 to more precisely reflect students’ *Willingness to Communicate in L2 Group Work*. In order to check if these modified parts work well, the “want” version and the “be willing to” version of Part F in Questionnaire 2 were piloted with 32 students in the COM course. The descriptive statistics for each item (Table 6) showed that a few items exhibited kurtosis or skewness values slightly exceeding two times *SEK* and *SES*, respectively. However, because this was a pilot, no students were excluded, and all items were kept for analysis. In the pilot version of Questionnaire 2, I included only Part F (both the “want to” version and the “be willing to” version) to make sure that the change of wording did not affect the reliability. The reliability of the “want to” version was  $\alpha = .89$ , and that of the “willing to” version was  $\alpha = .93$ .



Table 6. Descriptive Statistics for “Want to” items and “Willing to” Items

	N		M	SE	95% Confidence		SD	Skew	SES	Kurt	SEK
	Valid	Missing			Upper Limit	Lower Limit					
Want to-1	33	0	4.52	.12	4.80	4.30	.67	-1.07	.41	.05	.80
Want to-2	33	0	3.15	.19	3.49	2.70	1.06	.01	.41	-.96	.80
Want to-3	33	0	3.09	.21	3.52	2.61	1.21	.16	.41	-1.08	.80
Want to-4	33	0	3.85	.20	4.25	3.42	1.12	-.96	.41	.67	.80
Want to-5	32	1	3.28	.21	3.74	2.84	1.20	.02	.41	-.79	.81
Want to-6	33	0	3.55	.18	3.89	3.14	1.03	-.22	.41	-.26	.80
Want to-7	32	1	3.94	.19	4.30	3.51	1.08	-.86	.41	.29	.81
Want to-8	33	0	3.39	.20	3.88	3.02	1.17	.02	.41	-1.03	.80
Want to-9	33	0	2.91	.20	3.29	2.45	1.13	.19	.41	-.65	.80
Want to-10	33	0	2.48	.18	2.89	2.14	1.03	.85	.41	.54	.80
Willing to-1	33	0	4.12	.14	4.40	3.79	.82	-.60	.41	-.23	.80
Willing to-2	32	1	2.88	.18	3.26	2.48	1.04	.45	.41	-.02	.81
Willing to-3	33	0	2.91	.20	3.29	2.45	1.13	.33	.41	-.32	.80
Willing to-4	33	0	3.36	.22	3.76	2.82	1.27	-.06	.41	-1.10	.80
Willing to-5	32	1	3.09	.19	3.47	2.66	1.09	.12	.41	-.37	.81
Willing to-6	33	0	3.12	.21	3.54	2.65	1.19	-.01	.41	-.73	.80
Willing to-7	33	0	3.61	.22	4.01	3.09	1.25	-.41	.41	-1.16	.80
Willing to-8	33	0	2.82	.23	3.32	2.35	1.33	.27	.41	-1.01	.80
Willing to-9	33	0	2.70	.20	3.06	2.23	1.13	.37	.41	-.16	.80
Willing to-10	33	0	2.58	.19	2.99	2.17	1.09	.49	.41	-.16	.80

Note. Skew = skewness; Kurt = kurtosis.

### Assumptions of the Factor Analysis

*Data screening.* Although 772 students responded to Questionnaire 1, only 729 students completed Questionnaire 2 because some students were absent from the class on the day of administration or did not submit it. Out of 729 students, 13 students did not answer at least one section, so those students were excluded from further analysis. Thus, the data from 716 students were screened. Some students failed to respond to all the

items, but no pattern of missing data was detected. Missing data were estimated with the mean for that item.

*Outliers.* Descriptive statistics for each item were calculated in order to detect univariate outliers. Once again, because of the large  $N$ -size, histograms were checked for all items. The majority of the histograms appeared normal; thus, normality of the data was not problematic. Item D7 was extremely negatively skewed, so the raw data for that item were transformed to standardized  $z$ -scores. Twelve cases were identified as univariate outliers with a  $z$ -score of  $> |3.29|$ . Also, a close examination of the questionnaires revealed that two students did not respond seriously. These two students were excluded from further analysis, leaving an  $N$ -size of 702.

Next, multivariate outliers were identified with linear regression using a serial number as a dummy independent variable to obtain Mahalanobis distances. The alpha level was set at .001. Because there were 64 items in Questionnaire 2, cases with Mahalanobis distances greater than 99.607 were considered multivariate outliers (Tabachnick & Fidell, 2001, p. 988). Ninety-three cases were identified as multivariate outliers, and they were excluded from the factor analysis. This reduced the sample size to 609.

*Normality.* Descriptive statistics were calculated once again; no further outliers were detected. Because of the large  $N$ -size (more than 600), the shape of the distribution

is more important than the skewness/kurtosis statistics themselves (Field, 2005; Tabachnick & Fidell, 2001). Therefore, histograms were checked for all items. The majority of the histograms looked normal. Although some of the histograms indicated the existence of ceiling effects, it is not unusual for most of the respondents to mark certain items very high. Therefore, the normality of the data in this study was not considered problematic.

*Linearity.* Linearity among pairs of variables was assessed through an examination of the scatterplots. Because it was not practical to check all 64 variables, a spot check was conducted with 15 randomly selected combinations. No curvilinear relationships were identified. In addition, because multivariate outliers had already been eliminated, multivariate normality was not considered a problem. Multivariate normality suggests linearity among pairs of the variables. Therefore, linearity was further assured.

*Sample size.* The sample size of 609 (after univariate and multivariate outliers excluded) was adequate for conducting a factor analysis (Tabachnick & Fidell, 2001).

*Factorability of R.* Factorability of R was checked by examining Kaiser's measure of sampling adequacy. SPSS principal component analysis yielded a Kaiser value of .95, which was greater than the critical value of .60 (Tabachnick & Fidell, 2001). Therefore, the assumption of factorability of R was met.

*Absence of multicollinearity and singularity.* In order to detect multicollinearity and singularity, SPSS Regression Collinearity Diagnostics were performed. According to Tabachnick and Fidell (2001), when a conditioning index is greater than 30 for a given dimension and at least two variance proportions for an individual variable exceed .50, multicollinearity is detected. The highest condition index was 12.35, and no dimensions had more than one variance proportion exceeding .50. Therefore, no multicollinearity was detected.

#### *Factor Analysis*

After meeting the assumptions of the factor analysis, a generalized least squares extraction with promax rotation was conducted through SPSS FACTOR for 64 items (the same items as on Questionnaire 1) on Questionnaire 2 for a sample of 609 students. This factor analysis was conducted in order to confirm that the same factors could be extracted from Questionnaire 1 and Questionnaire 2. The six factors that were extracted explained 58.30% of the total variance. All items, except F1, A6, D6R, and D7R, loaded highly (> .45) on the expected factors.

As shown in Table 7, 67% (10 combinations) of the all the combinations were  $|\lambda| \geq .32$  or larger, thus, an oblique rotation was warranted (Tabachnick & Fidell, 2001, p. 622). Promax rotation was used for the same reason stated above. Table 8 shows the pattern matrix of 64 items on Questionnaire 2 after promax rotation. As shown below, the

Table 7. *Factor Correlation Matrix*

Factor	1	2	3	4	5	6
1 BGWU	-					
2 SPCC	.36	-				
3 WTC	.36	.65	-			
4 CA	-.32	-.23	-.20	-		
5 PBVGW	.62	.28	.34	-.36	-	
6 NTIO	.37	.13	.05	-.35	.39	-

*Note.* Extraction Method: Generalized Least Squares. Rotation Method: Promax with Kaiser Normalization. BGWU = *Beliefs of Group Work Usefulness*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; WTC = *Willingness to Communicate in L2 Group Work*; CA = *Communication Apprehension in L2 Group Work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*.

reliabilities were satisfactorily high. The results of the factor analyses and the reliabilities on both Questionnaires 1 and 2 indicated that both questionnaires were reliable and valid for the sample of respondents in this study.

### *Group Differences*

The participants were divided into four groups based on their proficiency level and the type of course in which they were studying. The students were placed in either Level 1 (higher proficiency) or Level 2 (lower proficiency) according to their performance on the placement test administered at the beginning of the spring semester, 2005. However, the degree to which the two groups of students differed in terms of their English proficiency is unclear because the descriptive data for the placement test was unavailable. Only information indicating which classes were Level 1 and which were Level 2 was obtainable from the university administrators.

Table 8. *Pattern Matrix for the 64 items on Questionnaire 2 with Factor Names and Reliabilities*

Item Factor	Factor						$h^2$
	1	2	3	4	5	6	
<b>Factor 1 (Part E): Beliefs of Group Work Usefulness (20 items, <math>\alpha = .95</math>)</b>							
<b>Part E-17:</b> By working together in group work, we can better understand each other.	.81	-.10	.01	-.05	.03	.02	.69
<b>Part E-7:</b> When we work together in group, we can find something that we often overlook when working alone.	.81	.04	-.07	.11	-.01	-.03	.71
<b>Part E-18:</b> Even if there is a conflict, we can resolve it by working together.	.77	-.12	.07	-.16	-.04	-.06	.55
<b>Part E-13:</b> I can learn from other group members.	.76	-.06	-.01	.01	.05	-.03	.69
<b>Part E-5:</b> During group work I learn various opinions and ideas from group members.	.75	.10	-.02	.18	.04	.06	.80
<b>Part E-16:</b> I will willingly help other group members in group work.	.75	-.01	.03	-.10	-.03	-.01	.36
<b>Part E-14:</b> Group work enables me to like my group members more.	.75	-.09	-.03	-.08	.02	.05	.76
<b>Part E-4:</b> Whether or not I speak in group work, I listen carefully to what my group members are saying.	.74	.15	.00	.13	-.12	-.05	.69
<b>Part E-6:</b> I will be willing to listen to my group members if they point out my mistakes.	.73	-.04	.01	.01	-.03	-.03	.76
<b>Part E-19:</b> After some argument in group work, we can become better friends.	.73	-.15	.12	-.16	-.02	-.01	.58
<b>Part E-3:</b> While discussing with my group members, I can find answers to the questions that I couldn't answer on my own.	.72	.07	-.04	.16	.01	-.03	.77
<b>Part E-15:</b> Group members will be willing to help me in group work.	.72	-.05	.06	-.12	.02	-.05	.82
<b>Part E-9:</b> If I present a different view from theirs, my group members will listen to it.	.72	.07	-.03	-.03	-.06	.02	.82
<b>Part E-20:</b> After a conflict with my group member, I can fix the relationship with her/him.	.71	-.07	.08	-.21	-.05	-.10	.74
<b>Part E-11:</b> Students who help other group members learn well.	.64	-.06	.09	.03	.16	.00	.82
<b>Part E-12:</b> When I talk to groupmates, I will notice my mistakes.	.62	-.02	.05	.03	.06	-.01	.82
<b>Part E-2:</b> By listening attentively, we can help other members notice something new.	.62	.04	.02	.05	.05	-.08	.72

Table 8 continues

Table 8. (continued)

Item Factor	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part E-8:</b> Conclusions reached through group discussion are better than when I think alone.	<b>.60</b>	-.07	.02	.07	.01	.09	.71
<b>Part E-1:</b> While listening to other members discuss, I will notice my mistakes.	<b>.59</b>	-.01	.00	.11	-.03	-.03	.84
<b>Part E-10:</b> After working in group, I will eventually be able to do things on my own that I can't do alone now.	<b>.51</b>	.02	.10	-.01	.06	.00	.87
<b>Factor 2 (Part B): Self-perceived Communicative Competence in L2 Group Work (10 items, <math>\alpha = .94</math>)</b>							
<b>Part B-3:</b> I can ask questions in English if a group member says something unclear to me.	.00	<b>.87</b>	-.01	-.01	-.07	.00	.89
<b>Part B-6:</b> If I have a different idea or opinion from group members, I can say it in English.	-.05	<b>.86</b>	.04	-.03	-.02	.00	.85
<b>Part B-2:</b> If I need a help from my group members, I can ask them in English.	-.01	<b>.86</b>	-.03	-.01	.03	-.04	.86
<b>Part B-5:</b> I can show empathy or my feelings to my group members in English.	-.03	<b>.85</b>	.01	.04	.02	.03	.73
<b>Part B-1:</b> If my group members ask me questions in English, I can answer them in English.	.00	<b>.83</b>	-.03	-.07	-.03	-.06	.75
<b>Part B-4:</b> I can do group work in English if the task is simple.	-.01	<b>.77</b>	.00	.04	.08	-.01	.74
<b>Part B-7:</b> I can convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.	.15	<b>.66</b>	-.02	.04	.01	.10	.88
<b>Part B-9:</b> I can make a plan for group project in English with group members.	-.07	<b>.65</b>	.23	-.08	.02	-.07	.90
<b>Part B-10:</b> If a conflict arises during group work, I can find a way to resolve it in English.	-.16	<b>.62</b>	.25	-.13	.02	-.05	.66
<b>Part B-8:</b> I can express complex ideas in English.	-.23	<b>.60</b>	.17	-.14	.05	-.14	.74
<b>Factor 3 (Part F): Willingness to Communicate in L2 Group Work (10 items, <math>\alpha = .96</math>)</b>							
<b>Part F-1:</b> If my group members ask me questions in English, I am willing to answer them in English.	.18	.38	.33	.06	-.04	.05	.81
<b>Part F-9:</b> I am willing to make a plan for group project in English with group members.	.00	-.12	<b>.94</b>	-.06	.03	-.01	.66
<b>Part F-10:</b> If a conflict arises during group work, I am willing to find a way to resolve it in English.	-.07	-.10	<b>.94</b>	-.08	.04	-.02	.63
<b>Part F-6:</b> If I have a different idea or opinion from group members, I am willing to say it in English.	.07	.08	<b>.84</b>	.06	-.05	.03	.68

Table 8 continues

Table 8. (continued)

Item Factor	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part F-8:</b> I am willing to express complex ideas in English.	-.07	.00	<b>.84</b>	-.06	.02	-.04	.61
<b>Part F-5:</b> I am willing show empathy or my feelings to my group members in English.	.07	.18	<b>.75</b>	.09	.00	.04	.64
<b>Part F-3:</b> I am willing to ask questions in English if a group member says something unclear to me.	.09	.18	<b>.74</b>	.05	-.10	.07	.69
<b>Part F-2:</b> If I need help from my group members, I am willing to ask them in English.	.07	.21	<b>.71</b>	.05	-.03	.01	.69
<b>Part F-4:</b> I am willing to do group work in English if the task is simple.	.08	.15	<b>.69</b>	.06	.02	.04	.79
<b>Part F-7:</b> I am willing to convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.	.16	.11	<b>.63</b>	.11	.06	.09	.66
<b>Factor 4 (Part A): Communication Apprehension in L2 Group Work (10 items, <math>\alpha = .88</math>)</b>							
<b>Part A-4:</b> I feel nervous when I work in a group in English class.	.04	-.01	.07	<b>.79</b>	.07	-.02	.75
<b>Part A-9:</b> When working in group, I feel nervous if I am asked a question by other members.	.08	-.04	.01	<b>.78</b>	.11	.09	.52
<b>Part A-2:</b> I feel uneasy when I do group work in English class.	-.10	.03	.00	<b>.67</b>	-.04	.01	.67
<b>Part A-8:</b> If other members say different opinions from mine, I will be nervous.	-.07	-.03	.04	<b>.67</b>	.12	.05	.53
<b>Part A-3:</b> I feel anxious when I work in English class in a group with classmates who I don't know well.	.15	-.01	-.04	<b>.67</b>	-.03	-.02	.69
<b>Part A-5:</b> Group work in English class is painful for me.	.01	-.01	-.02	<b>.66</b>	-.13	-.17	.64
<b>Part A-10:</b> In group work, I can't ask questions to other members because I feel embarrassed.	-.04	-.07	.00	<b>.63</b>	.10	-.02	.70
<b>Part A-1R:</b> I feel relaxed when I work in a group in English class.	-.15	.00	.00	<b>.59</b>	-.10	.04	.76
<b>Part A-7:</b> I want to avoid group work as much as possible in English class.	-.08	-.01	.04	<b>.53</b>	-.20	-.18	.76
<b>Part A-6:</b> In group work in English class, I feel more comfortable when listening to other members' opinions than talking to group members.	.14	-.22	-.05	<b>.36</b>	.00	.03	.75
<b>Factor 5 (Part C): Positive Beliefs about the Value of Group Work (6 items, <math>\alpha = .93</math>)</b>							
<b>Part C-1:</b> Group work is important for human growth.	.01	.07	-.12	.06	<b>.94</b>	-.01	.78

Table 8 continues



Table 8. (continued)

Item Factor	Factor						$h^2$
	1	2	3	4	5	6	
<b>Part C-2:</b> Group work is important for human society.	.10	.04	-.12	.07	<b>.88</b>	-.03	.74
<b>Part C-3:</b> Experience in the process of group work is valuable.	.10	-.01	-.01	.03	<b>.85</b>	.01	.79
<b>Part C-4:</b> Group work is valuable to facilitate students' autonomy.	-.05	-.04	.08	-.01	<b>.82</b>	-.05	.75
<b>Part C-6:</b> Group work is a good opportunity for me to understand myself better.	-.03	-.03	.10	-.01	<b>.77</b>	-.05	.66
<b>Part C-5:</b> Communication skills developed in group work are useful for my future.	.03	.02	.13	.03	<b>.72</b>	.02	.88
<b>Factor 6 (Part D): Negative Traditional Instruction Orientation (8 items, <math>\alpha = .89</math>)</b>							
<b>Part D-2R:</b> I learn efficiently in a teacher-led class that does not have group work.	-.24	-.20	.17	.04	.00	<b>.97</b>	.87
<b>Part D-1R:</b> I learn well in a teacher-led class that has no group work.	-.23	-.19	.18	.05	-.05	<b>.96</b>	.84
<b>Part D-3R:</b> Lecture style should be employed in college English classes more often than group work.	.05	-.04	.03	-.07	-.04	<b>.66</b>	.87
<b>Part D-4R:</b> 100% teacher-led classes are more suitable for college education than classes that combine teacher lecture and group work.	.08	.09	-.08	-.02	-.02	<b>.66</b>	.88
<b>Part D-5R:</b> The teacher is the only one who should convey knowledge to students.	.20	.18	-.18	-.02	.00	<b>.59</b>	.77
<b>Part D-8R:</b> <u>Generally speaking</u> , it is waste of time to do group work in English classes.	.15	.09	-.08	-.11	.15	<b>.47</b>	.79
<b>Part D-6R:</b> Students should speak only when they are called on by the teacher.	.18	.20	-.09	-.02	.00	.42	.90
<b>Part D-7R:</b> The teacher is the only one who can provide right answers.	.29	.17	-.24	.01	-.08	.41	.87

*Note.* An R after an item number indicates that the item was reverse coded when analyzed.

The course descriptions did not indicate how often group work is used in a particular course. In order to make comparisons of the readiness for group work among these students after they had received one semester of English instruction, it was crucial that the two courses differed in the use of group work. Therefore, Questionnaire 2

included a question asking the students to indicate what percentage of class time was spent doing pair work and group work (1: 0%, 2: 20% or less, 3: 40% or less, 4: 60% or less, 5: 80% or less, and 6: more than 80%). This was a subjective measure of the use of group work.

All the LAC students took the Listening and Reading (L & R) class, and all the COM students enrolled in the Oral Communication (OC) class, both of which were held twice a week. These classes were the core English class in the respective programs. Each of the other two courses offered in the LAC or COM programs met once a week. Depending on the students' majors, different classes were offered. I intended to check the use of group work in all the classes, but many of the students could not distinguish the once-a-week classes from each other. Nine percent of the students (63 students out of 716) did not respond to the question about the use of group work in the once-a-week classes. However, only 16 students (2%) failed to respond to the question asking what percent of the time was used for group work in either the L & R class or the OC class. Moreover, these two classes represented different characteristics of the LAC and COM courses; the L & R course was focused on developing receptive skills and the OC course was focused on developing productive skills. Therefore, I decided to compare the use of group work only in the core classes.

First, missing data (16 cases) were estimated using the mean of the 716 students (LAC: 435 students, COM: 281 students). Then, descriptive statistics were calculated within each cell, and *z*-scores were obtained. Because of the large *N*-size (more than 700),

histograms were checked for each course (Field, 2005; Tabachnick & Fidell, 2001). No extreme divergence from normality was detected. Therefore, even though the kurtosis and skewness statistics slightly exceeded two times the absolute value of the standard error of skewness/kurtosis, the normality of the data was not considered problematic. The assumption of univariate normality was checked and met. Next, a scatterplot was examined to check linearity; no curvilinear relationships were identified. Although the cell sizes differed greatly, Levene's test of homogeneity of variance was not significant (.712,  $p = .399$ ). Therefore, the assumptions of a One-way ANOVA were met. The alpha level was set at .05. The dependent variable was the class time spent for group work, which was measured on a 6-point scale with one item on Questionnaire 2 (see above for a more detailed description of the item) and the independent variable was the course (2 levels). The results of the One-way ANOVA ( $F = 246.512, p < .001$ ) revealed that the COM students experienced significantly more time working in groups in the OC class than the LAC students in the L & R class; however, it should be recalled that this result was based on the students' subjective judgments. The mean of the LAC students was 3.13, and that of the COM students was 4.73 (Table 9). Cohen's  $d$  effect size was calculated using the following formula:  $d = (\text{the difference between the two groups means}) / \text{average } SD \text{ (or } SD \text{ of the control group)}$ . The effect size tells the importance of an effect. Conventionally, an effect size of 0 means no effect, .20 indicates a small effect, .50 shows a moderate effect, and .80 is a large effect (Cohen, 1988). Cohen's  $d$  for this case was 1.04 (using average  $SD$ ) and 1.17 (using control group  $SD$ ).

Table 9. *Descriptive Statistics for the Use of Group Work in Two Courses*

Course	<i>n</i>	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>	<i>Skew</i>	<i>SES</i>	<i>Kurt</i>	<i>SEK</i>
				Upper limit	Lower limit					
LAC	435	3.13	0.07	3.26	3.00	1.36	0.44	0.12	-0.54	0.23
COM	281	4.73	0.08	4.88	4.58	1.28	-0.80	0.15	-0.36	0.29

*Note.* Skew = skewness; Kurt = kurtosis.

## CHAPTER 6

### RESULTS

#### Research Question 1

Research Question 1 asked “What is the students’ *Readiness for L2 Group Work* immediately upon entering a university and after studying one semester?” This question will be addressed in three ways. First, I will report the students’ *Readiness for L2 Group Work* at the beginning and at the end of the semester by showing the descriptive statistics for Questionnaires 1 and 2. Next, I will focus on the five sub-constructs of *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work* and report the students’ tendency as a whole at the beginning and at the end of the semester by showing the descriptive statistics for Questionnaires 1 and 2. Then, I will separately describe the four groups’ (COM, LAC, higher proficiency, lower proficiency) tendencies for the five sub-constructs of *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work* for both Questionnaires 1 and 2.

The items for each part of the questionnaires were selected based on the results of the factor analysis, the mean of each part was calculated, and descriptive statistics were obtained. As noted above, the wording of the *Willingness to Communicate in L2 Group Work* items in Questionnaires 1 and 2 differed. In Questionnaire 1, “*shitai* (want to)” was used, while in Questionnaire 2, “*suru tsumorida* (be willing to)” was used.

### *Readiness for L2 Group Work*

Table 10 shows the descriptive statistics for *Readiness for L2 Group Work* gathered with Questionnaires 1 and 2. First, the COM students, regardless of their proficiency levels, scored higher on *Readiness for L2 Group Work* ( $M = 7.10$  and  $= 7.27$  on Questionnaire 1;  $M = 7.22$  and  $7.40$  on Questionnaire 2) than the LAC students ( $M = 6.89$  and  $= 6.66$  on Questionnaire 1;  $M = 7.11$  and  $6.75$  on Questionnaire 2) on both Questionnaires 1 and 2. The lower proficiency COM students had higher *Readiness for L2 Group Work* than the higher proficiency COM students. In contrast, the higher proficiency LAC students scored higher than the lower proficiency LAC students.

Among the four groups, the lower proficiency COM students showed the highest *Readiness for L2 Group Work*, followed by the higher proficiency COM students and the higher proficiency LAC students on Questionnaire 1. The lower proficiency LAC students showed the lowest *Readiness for L2 Group Work* among the four groups. This trend did not change on Questionnaire 2.

Comparing *Readiness for L2 Group Work* on Questionnaire 1 and Questionnaire 2, all the groups scored higher on Questionnaire 2 than on Questionnaire 1. This indicates that after one semester of English instruction, the students became more ready for L2 group work.

Table 10 shows high kurtosis (3.01) for the higher proficiency LAC students on Questionnaire 2. This indicates an extremely strong central tendency for this group of students.

Table 10. *Descriptive Statistics for Readiness for L2 Group Work on Questionnaires 1 and 2*

Q	Level	Course	n	M	SE	95% CI		SD	Skew	SES	Kurt	SEK
						Upper limit	Lower limit					
1	Higher	LAC	127	6.89	.08	7.06	6.73	.93	.02	.21	.50	.43
		COM	84	7.10	.10	7.30	6.90	.91	-.17	.26	-.66	.52
	Lower	LAC	249	6.66	.06	6.77	6.54	.91	.01	.15	.24	.31
		COM	169	7.27	.07	7.40	7.13	.88	-.12	.19	-.47	.37
2	Higher	LAC	124	7.11	.08	7.27	6.94	.94	-.73	.22	3.01	.43
		COM	79	7.22	.11	7.43	7.00	.96	.32	.27	.31	.53
	Lower	LAC	245	6.75	.06	6.87	6.64	.91	.11	.16	.65	.31
		COM	161	7.40	.08	7.55	7.25	.97	.11	.19	.02	.38

*Note.* Q = Questionnaire; LAC = Language and Culture course; COM = Communication course; Skew = skewness; Kurt = kurtosis. *Readiness for L2 Group Work* was calculated as follows:  $RGW = (M \text{ of CA-R} + M \text{ of SPCC}) / 2 + (M \text{ of PBVGW} + M \text{ of NTIO} + M \text{ of BGWU}) / 3$ , where *RGW* = *Readiness for L2 Group Work*, *CA-R* = *Communication Apprehension in L2 Group Work* reversed, *SPCC* = *Self-perceived Communicative Competence*, *PBVGW* = *Positive Beliefs about the Value of Group Work*, *NTIO* = *Negative Traditional Instruction Orientation*, *BGWU* = *Beliefs of Group Work Usefulness*.

*Overall Tendency for the Five Sub-constructs of Readiness for L2 Group Work and Willingness to Communicate in L2 Group Work*

Table 11 shows the descriptive statistics for the six parts of Questionnaires 1 and 2 for the students whose data were used for the factor analyses. First, the mean of the items in each part was calculated. Based on the obtained mean, the descriptive statistics shown below were calculated.

The results of Questionnaire 1 show the students' perceptions at the beginning of the English course. Because Questionnaire 1 was administered in the first English lesson that took place shortly after the students' entrance into the university, the students' responses could not have been influenced by English instruction at the university. The

Table 11. *Descriptive Statistics for the Six Parts of Questionnaires 1 (N = 629) and 2 (N = 609)*

Q	Part	N	k	M	SE	95% CI		SD	Skew	SES	Kurt	SEK
						Upper limit	Lower limit					
1	A (CA)	629	10	2.77	.03	2.84	2.71	.79	.06	.10	-.36	.19
	B (SPCC)	629	10	2.76	.03	2.81	2.71	.65	.00	.10	-.23	.19
	C (PBVGW)	629	6	4.17	.03	4.22	4.11	.67	-.62	.10	.10	.19
	D (NTIO)	629	8	3.63	.03	3.68	3.58	.66	-.39	.10	.13	.19
	E (BGWU)	629	20	4.00	.02	4.04	3.96	.52	-.16	.10	-.31	.19
	F (WTC)	629	10	3.76	.03	3.83	3.70	.82	-.25	.10	-.51	.19
2	A (CA)	609	10	2.45	.03	2.50	2.39	.72	.18	.10	-.28	.20
	B (SPCC)	609	10	2.85	.03	2.92	2.79	.80	.11	.10	.17	.20
	C (PBVGW)	609	6	3.92	.03	3.98	3.86	.79	-.60	.10	.59	.20
	D (NTIO)	609	8	3.79	.03	3.84	3.73	.67	-.56	.10	.70	.20
	E (BGWU)	609	20	3.85	.02	3.90	3.81	.58	-.49	.10	2.09	.20
	F (WTC)	609	10	3.13	.03	3.20	3.06	.86	-.03	.10	.09	.20

*Note.* Q = Questionnaire; CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; WTC = *Willingness to Communicate in L2 Group Work*; Skew = skewness; Kurt = kurtosis.

mean of *Communication Apprehension in L2 Group Work* was 2.77, which was slightly below the midpoint of the 5-point Likert scale. A 3 on the Likert scale indicates moderate endorsement of the construct measured. Therefore, the mean of 2.77 indicated that the participants as a whole showed a slightly low level of communication apprehension. The mean of *Self-perceived Communicative Competence in L2 Group Work* ( $M = 2.76$ ) showed that the participants also viewed themselves slightly low in terms of communicative competence. One interpretation is that, on one hand, they were not particularly nervous when communicating in English in small groups, but on the other hand, they did not perceive themselves as particularly competent in their ability to



communicate well with their peers in English. The means indicated that both groups were neutral regarding communication confidence, which is an overarching construct consisting of communication apprehension and self-perceived communicative competence (Yashima, 2002; Yashima et al., 2004).

In terms of beliefs about group work, the results showed that the students had positive beliefs in all three belief parts. *Positive Beliefs about the Value of Group Work* ( $M = 4.17$ ) and *Beliefs of Group Work Usefulness* ( $M = 4.00$ ), in particular, were endorsed highly by the students. The participants did not endorse *Negative Traditional Instruction Orientation* ( $M = 3.63$ ) as highly as *Positive Beliefs about the Value of Group Work* ( $M = 4.17$ ) and *Beliefs of Group Work Usefulness* ( $M = 4.00$ ). These results indicated that many of the participants started the English classes with positive beliefs about L2 group work.

The results of Questionnaire 2 showed a somewhat different picture of the students. After a semester of English instruction, the students' *Communication Apprehension in L2 Group Work* decreased from 2.77 to 2.45, while their *Self-perceived Communicative Competence in L2 Group Work* increased slightly from 2.78 to 2.85. Because all English instruction at this university is supposed to be conducted in English, the students should have had a great deal of exposure to English and frequent opportunities to communicate in English. This exposure would presumably reduce their *Communication Apprehension in L2 Group Work* and increase their *Self-perceived Communicative Competence in L2 Group Work*.

All three constructs concerning beliefs about group work received high ratings (*Positive Beliefs about the Value of Group Work* = 3.92, *Negative Traditional Instruction Orientation* = 3.79, and *Beliefs of Group Work Usefulness* = 3.85) in Questionnaire 2. However, the students' *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* decreased slightly compared with the Questionnaire 1 results. Only *Negative Traditional Instruction Orientation* became marginally higher.

The students showed a sharp decline in *Willingness to Communicate in L2 Group Work* from 3.76 on Questionnaire 1 to 3.13 on Questionnaire 2. It seems to indicate students decreased in their *Willingness to Communicate in L2 Group Work* after one semester of English instruction. However, because the wording regarding *Willingness to Communicate in L2 Group Work* in Questionnaires 1 and 2 differed, the results should be viewed with caution.

#### *Group Tendencies (Questionnaire 1) for the Five Sub-constructs of Readiness for L2*

##### *Group Work and Willingness to Communicate in L2 Group Work*

Turning to each group, Table 12 shows that the students in the higher proficiency LAC group, the higher proficiency COM group, and the lower proficiency LAC group showed moderate communication apprehension in L2 group work ( $M = 2.86, 2.73, 2.95$ , respectively) at the beginning of the course. In contrast to those results, the lower proficiency COM students showed a rather low amount of communication apprehension (2.47). The higher proficiency students generally viewed themselves as more

communicatively competent than the lower proficiency students as indicated by the *Self-perceived Communicative Competence in L2 Group Work* results. However, the lower proficiency COM students' mean *Self-perceived Communicative Competence in L2 Group Work* was 2.85, which was marginally lower than that of the higher proficiency LAC students. Therefore, taking proficiency level differences into account, the lower proficiency COM and higher proficiency LAC students' *Self-perceived Communicative Competence in L2 Group Work* were generally similar.

The students in all the groups were found to hold positive beliefs about L2 group work. The mean *Positive Beliefs about the Value of Group Work* scores exceeded 4.00 in all groups, with the lower proficiency COM students showing the highest mean (4.32). That is, the students believed that cooperation is important and valuable. *Negative Traditional Instruction Orientation* was endorsed more highly by the COM students than the LAC students regardless of the proficiency level. However, the mean for *Negative Traditional Instruction Orientation* was the lowest among the three belief parts in all the groups. Thus, although the students were positive about group work, they did not view traditional instruction particularly negatively. The four groups showed few differences for *Beliefs of Group Work Usefulness*.

The higher proficiency students did not show much difference in their beliefs about L2 group work regardless of the course. On the contrary, among the lower proficiency students, the COM students displayed more positive beliefs about group work in all three

Table 12. *Descriptive Statistics for Questionnaire 1 (Level × Course)*

Level	Course	Part	<i>n</i>	<i>k</i>	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>	Skew	<i>SES</i>	Kurt	<i>SEK</i>
							Upper limit	Lower limit					
Higher	LAC	A	127	10	2.86	.07	3.00	2.73	.76	.03	.21	-.21	.43
		B	127	10	2.87	.06	2.99	2.75	.66	.11	.21	.24	.43
		C	127	6	4.08	.06	4.21	3.96	.70	-.55	.21	.04	.43
		D	127	8	3.66	.06	3.78	3.55	.65	-.52	.21	1.32	.43
		E	127	20	3.93	.04	4.02	3.84	.51	-.24	.21	.68	.43
		F	127	10	3.78	.07	3.93	3.64	.83	-.26	.21	-.64	.43
Higher	COM	A	84	10	2.73	.07	2.89	2.58	.71	.09	.26	-.62	.52
		B	84	10	2.98	.06	3.13	2.83	.70	-.46	.26	.06	.52
		C	84	6	4.15	.06	4.30	4.00	.69	-.48	.26	-.71	.52
		D	84	8	3.77	.06	3.91	3.63	.64	-.47	.26	.34	.52
		E	84	20	4.01	.04	4.12	3.89	.51	-.34	.26	-.28	.52
		F	84	10	4.03	.07	4.18	3.87	.70	-.36	.26	-.03	.52
Lower	LAC	A	249	10	2.95	.05	3.05	2.85	.80	-.05	.15	-.26	.31
		B	249	10	2.57	.04	2.64	2.49	.60	-.02	.15	-.37	.31
		C	249	6	4.11	.04	4.19	4.02	.67	-.63	.15	.50	.31
		D	249	8	3.48	.04	3.56	3.39	.65	-.38	.15	-.33	.31
		E	249	20	3.96	.03	4.02	3.89	.53	-.11	.15	-.51	.31
		F	249	10	3.58	.06	3.69	3.47	.88	-.04	.15	-.61	.31
Lower	COM	A	169	10	2.47	.06	2.58	2.36	.74	.14	.19	-.44	.37
		B	169	10	2.85	.05	2.95	2.76	.62	-.01	.19	-.49	.37
		C	169	6	4.32	.05	4.42	4.23	.60	-.68	.19	-.24	.37
		D	169	8	3.77	.05	3.87	3.67	.66	-.34	.19	.04	.37
		E	169	20	4.13	.04	4.20	4.05	.50	-.07	.19	-.78	.37
		F	169	10	3.89	.06	4.00	3.78	.73	-.30	.19	-.45	.37

*Note.* LAC = Language and Culture course; COM = Communication course; Part A = Communication Apprehension in L2 Group Work; Part B = Self-perceived Communicative Competence in L2 Group Work; Part C = Positive Beliefs about the Value of Group Work; Part D = Negative Traditional Instruction Orientation; Part E = Beliefs of Group Work Usefulness; Part F = Willingness to Communicate in L2 Group Work; Skew = skewness; Kurt = kurtosis.

parts than the LAC students. The lower proficiency COM students had the most positive beliefs about group work as measured by the three belief sections.

The higher proficiency COM students (4.03) had the highest *Willingness to Communicate in L2 Group Work*. They were followed by the lower proficiency COM students (3.89), the higher proficiency LAC students (3.78), and the lower proficiency LAC students (3.58). These results suggest that the COM students were more willing to communicate in L2 group work than the LAC students, and within the same course, the higher their English proficiency, the more willing they were to communicate in L2 group work.

*Group Tendencies (Questionnaire 2) for the Five Sub-constructs of Readiness for L2 Group Work and Willingness to Communicate in L2 Group Work*

Table 13 shows the descriptive statistics for Questionnaire 2 grouped according to proficiency level and the course. All groups showed relatively low *Communication Apprehension in L2 Group Work*, and this was particularly true for the lower proficiency COM students ( $M = 2.18$ ). Moreover, the higher proficiency LAC students, higher proficiency COM students, and lower proficiency COM students displayed moderate degrees of *Self-perceived Communicative Competence in L2 Group Work*. As expected, the higher proficiency COM students exhibited the highest *Self-perceived Communicative Competence in L2 Group Work* ( $M = 3.14$ ), while the lower proficiency LAC students were relatively low ( $M = 2.58$ ).

Table 13. *Descriptive Statistics for Questionnaire 2 (Level × Course)*

Level	Course	Part	<i>n</i>	<i>k</i>	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>	Skew	<i>SES</i>	Kurt	<i>SEK</i>
							Upper limit	Lower limit					
Higher	LAC	A	124	10	2.54	.06	2.66	2.42	.67	.16	.22	-.35	.43
		B	124	10	3.01	.07	3.14	2.88	.74	-.27	.22	.20	.43
		C	124	6	3.96	.07	4.10	3.83	.74	-.74	.22	1.24	.43
		D	124	8	3.79	.06	3.91	3.67	.65	-.97	.22	1.61	.43
		E	124	20	3.86	.05	3.95	3.77	.51	-.50	.22	1.29	.43
		F	124	10	3.30	.08	3.45	3.15	.85	-.29	.22	.25	.43
Higher	COM	A	79	10	2.44	.08	2.59	2.28	.71	.09	.27	.03	.53
		B	79	10	3.14	.09	3.32	2.96	.81	.23	.27	.18	.53
		C	79	6	3.83	.08	3.99	3.67	.73	.06	.27	-.35	.53
		D	79	8	3.82	.07	3.97	3.68	.64	-.56	.27	1.24	.53
		E	79	20	3.95	.06	4.06	3.83	.52	.22	.27	.03	.53
		F	79	10	3.49	.08	3.66	3.32	.75	.27	.27	.08	.53
Lower	LAC	A	245	10	2.58	.05	2.67	2.49	.75	.15	.16	-.24	.31
		B	245	10	2.58	.05	2.67	2.48	.78	.19	.16	.25	.31
		C	245	6	3.81	.05	3.91	3.71	.82	-.59	.16	.58	.31
		D	245	8	3.67	.04	3.76	3.59	.67	-.55	.16	.92	.31
		E	245	20	3.79	.04	3.86	3.71	.59	-.51	.16	2.44	.31
		F	245	10	2.86	.06	2.97	2.75	.87	.16	.16	.18	.31
Lower	COM	A	161	10	2.18	.05	2.28	2.07	.66	.16	.19	-.73	.38
		B	161	10	3.01	.06	3.13	2.89	.77	.28	.19	.40	.38
		C	161	6	4.10	.06	4.22	3.98	.79	-.84	.19	.98	.38
		D	161	8	3.94	.05	4.05	3.84	.68	-.43	.19	-.23	.38
		E	161	20	3.90	.05	4.00	3.81	.62	-.63	.19	2.28	.38
		F	161	10	3.23	.06	3.35	3.11	.77	.04	.19	.26	.38

*Note.* LAC = Language and Culture course; COM = Communication course; Part A = *Communication Apprehension in L2 Group Work*; Part B = *Self-perceived Communicative Competence in L2 Group Work*; Part C = *Positive Beliefs about the Value of Group Work*; Part D = *Negative Traditional Instruction Orientation*; Part E = *Beliefs of Group Work Usefulness*; Part F = *Willingness to Communicate in L2 Group Work*; Skew = skewness; Kurt = kurtosis.

The results of Parts C, D, and E revealed that the students still had generally positive beliefs about group work after receiving one semester of English instruction. The mean differences between the most positive group and the least positive group were .29 (4.10 – 3.81) for *Positive Beliefs about the Value of Group Work*, .27 (3.94 – 3.67) for *Negative Traditional Instruction Orientation*, and .16 (3.95 – 3.79) for *Beliefs of Group Work Usefulness*. However, the lower proficiency COM students had the most positive beliefs in all three parts among all the groups. On the other hand, the lower proficiency LAC students showed the least positive beliefs on all three belief constructs. The higher proficiency groups were more similar than the lower proficiency groups.

In terms of *Willingness to Communicate in L2 Group Work*, the higher proficiency COM students ( $M = 3.49$ ) showed the highest *Willingness to Communicate in L2 Group Work*, followed by the higher proficiency LAC and the lower proficiency COM students ( $M = 3.30$  and  $3.23$ , respectively), whose means were almost identical. The lower proficiency LAC students showed the lowest *Willingness to Communicate in L2 Group Work* ( $M = 2.86$ ).

Finally, the variances of Part E (*Beliefs of Group Work Usefulness*) were much smaller than those for the other parts of the questionnaire.

#### *Group Tendencies (Comparison of Questionnaires 1 and 2)*

A comparison of the Questionnaire 1 and Questionnaire 2 results presents a complex picture. Students in all groups had lower communication apprehension and a

higher degree of self-perceived L2 communicative competence after receiving one-semester of English instruction. Both of these findings suggest that the students increased their communication confidence after one semester.

However, the participants' beliefs about group work did not show a similar tendency. In fact, the mean scores of *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* decreased without exception, although the differences were marginal. In contrast, the mean score for *Negative Traditional Instruction Orientation* increased for all groups. Thus, regardless of the course and the proficiency level, the students were not as positive in their beliefs about the value of group work and did not view group work as useful when compared with the results seen at the beginning of the course, but they believed less in the superiority of traditional instruction than before.

The *Willingness to Communicate in L2 Group Work* items showed a decline in Questionnaire 2 (higher proficiency LAC: 3.30, higher proficiency COM: 3.49, lower proficiency LAC: 2.86, and lower proficiency COM: 3.23) compared with Questionnaire 1 (higher proficiency LAC: 3.78, higher proficiency COM: 4.03, lower proficiency LAC: 3.58, and lower proficiency COM: 3.89) regardless of the group. Although it appears that the students in all groups became less willing to communicate in L2 group work after receiving a semester of English instruction, as mentioned above, because the wording for the *Willingness to Communicate in L2 Group Work* items differed on Questionnaires 1 and 2, the results should be interpreted cautiously.



The comparisons in this section were based on descriptive statistics, and thus do not indicate whether or not these differences are statistically significant. In order to investigate such differences, let us now turn to Research Question 2.

### Research Question 2

Research Question 2 asked “To what degree does the students’ *Readiness for L2 Group Work* differ due to the type of course and proficiency grouping at the onset and the end of one semester?” This question will be addressed in two ways. First, the group differences for *Readiness for L2 Group Work* will be investigated by running a  $2 \times 2$  ANOVA. The dependent variable was the mean of the scores of *Readiness for L2 Group Work*, and the independent variables were the course (2 levels: COM and LAC) and proficiency (2 levels: higher and lower). Second, group differences for each factor will be investigated by running a  $2 \times 2$  ANOVA for each dependent variable. The dependent variables were the mean of the raw scores of *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, *Beliefs of Group Work Usefulness*, and *Willingness to Communicate in L2 Group Work*, and the independent variables were the course (2 levels: COM and LAC) and proficiency (2 levels: higher and lower).

Originally a two-way MANOVA was planned. However, when the assumptions were checked, the data were found to violate the assumption of equal variances because

of the unequal cell sizes. Employing a balanced design (equal cell size) was considered, but was dismissed because the sample would not represent the population. Therefore, ANOVAs were run instead of a MANOVA with a balanced design. Because, 16 ANOVAs were run (one time for *Readiness for L2 Group Work* for Questionnaires 1 and 2, six times for this series of analyses, once for the use of group work, and once for a mixed-within-between subjects ANOVA for Research Question 3), a traditional Bonferroni adjustment was considered as one way to avoid committing a Type I error, with  $\alpha = .05 / 16 = .003$ . However, this adjustment is likely to cause a Type II error; therefore, an alternative formula was used (Bonferroni adjustment online, retrieved on March 16, 2007 from <http://home.clara.net/sisa/bonfer.htm>). This formula is considered to adjust the  $\alpha$  level in a way that avoids both Type I and Type II errors. It arrives at an adjusted  $\alpha$  level using the original  $\alpha$  level, the number of  $F$  tests, the degrees of freedom, and the mean of the correlation of the dependent variables.

The 16 ANOVAs were categorized into four families: two ANOVA families for Questionnaires 1 and 2, one for the use of group work, and one for a mixed-within-between subjects ANOVA for Research Question 3. Questionnaires 1 and 2 were treated as different families because the ANOVA results of the two questionnaires were treated independently and the administration time was different. Seven ANOVAs were run for each administration of the questionnaire because the mean differences of *Readiness for L2 Group Work* and the six parts of the questionnaire were analyzed. The following data were submitted to the Bonferroni adjustment program. The original  $\alpha$

level was .05; the number of tests was 7; the degree of freedom was  $625 - 1 = 624$ ; and the mean of correlation of each part of the questionnaire was .23. An adjusted  $\alpha$  of .011 was obtained for Questionnaire 1. The same procedure was repeated for Questionnaire 2 and an adjusted  $\alpha$  of .017 was obtained.

### *Questionnaire 1*

#### *ANOVA Assumptions for Questionnaire 1*

First, the assumptions of the ANOVAs were checked. The descriptive statistics within each cell were calculated with 629 cases for Questionnaire 1. The raw scores were transformed to  $z$ -scores in order to identify participants with  $z$ -scores in excess of  $\pm 3.29$ . Four outliers were detected and deleted, leaving 625 cases. The number of cases within each cell is shown in Table 14.

Table 14. *Number of the Students in Each Course after Deleting Univariate Outliers (Questionnaire 1)*

Level	Course		Total
	LAC	COM	
Higher	125	84	209
Lower	247	169	416
Total	372	253	625

*Note:* LAC = Language and Culture course; COM = Communication Course.

Descriptive statistics for each cell shown in Table 14 were obtained (Table 15). Although the skewness for some parts exceeded two times the absolute value of the  $SES$ , when the histogram was checked, no abnormality was detected. The histograms for the

Table 15. *Descriptive Statistics for Each Cell after Excluding Univariate Outliers (Questionnaire 1, Level × Course)*

Level	Course	Var	n	M	SE	95% CI		SD	Skew	SES	Kurt	SEK
						Upper limit	Lower limit					
Higher	LAC	CA	125	2.85	.07	3.00	2.73	.75	-.01	.22	-.25	.43
		SPCC	125	2.88	.06	2.99	2.75	.66	.11	.22	.28	.43
		PBVGW	125	4.12	.06	4.21	3.96	.65	-.30	.22	-.67	.43
		NTIO	125	3.69	.05	3.78	3.55	.61	-.23	.22	.45	.43
		BGWU	125	3.95	.04	4.02	3.84	.47	.18	.22	-.59	.43
		WTC	125	3.80	.07	3.93	3.64	.82	-.27	.22	-.62	.43
		RGW	125	6.93	.08	7.09	6.77	.88	.34	.22	-.31	.43
Higher	COM	CA	84	2.73	.08	2.89	2.58	.71	.09	.26	-.62	.52
		SPCC	84	2.98	.08	3.13	2.83	.70	-.46	.26	.06	.52
		PBVGW	84	4.15	.08	4.30	4.00	.69	-.48	.26	-.71	.52
		NTIO	84	3.77	.07	3.91	3.63	.64	-.47	.26	.34	.52
		BGWU	84	4.01	.06	4.12	3.89	.51	-.34	.26	-.28	.52
		WTC	84	4.03	.08	4.18	3.87	.70	-.36	.26	-.03	.52
		RGW	84	7.10	.10	7.30	6.90	.91	-.17	.26	-.66	.52
Lower	LAC	CA	247	2.94	.05	3.05	2.85	.79	-.08	.15	-.28	.31
		SPCC	247	2.57	.04	2.64	2.49	.60	-.01	.15	-.35	.31
		PBVGW	247	4.13	.04	4.19	4.02	.63	-.32	.15	-.73	.31
		NTIO	247	3.48	.04	3.56	3.39	.65	-.38	.15	-.32	.31
		BGWU	247	3.97	.03	4.02	3.89	.52	-.04	.15	-.61	.31
		WTC	247	3.60	.06	3.69	3.47	.87	-.01	.15	-.62	.31
		RGW	247	6.68	.06	6.79	6.56	.89	.13	.15	.08	.31
Lower	COM	CA	169	2.47	.06	2.58	2.36	.74	.14	.19	-.44	.37
		SPCC	169	2.85	.05	2.95	2.76	.62	-.01	.19	-.49	.37
		PBVGW	169	4.32	.05	4.42	4.23	.60	-.68	.19	-.24	.37
		NTIO	169	3.77	.05	3.87	3.67	.66	-.34	.19	.04	.37
		BGWU	169	4.13	.04	4.20	4.05	.50	-.07	.19	-.78	.37
		WTC	169	3.89	.06	4.00	3.78	.73	-.30	.19	-.45	.37
		RGW	169	7.27	.07	7.40	7.13	.88	-.12	.19	-.47	.37

*Note.* N = 625. LAC = Language and Culture course; COM = Communication course; Var = variables; CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; WTC = *Willingness to Communicate in L2 Group Work*; RGW = *Readiness for L2 Group Work*; Skew = skewness; Kurt = kurtosis.

other parts did not indicate any non-normality, either. Therefore, the assumption of normality was met. Levene's test of equality of error variances were not over the critical  $p$ -value of .01 (*Communication Apprehension in L2 Group Work* = .632, *Self-perceived Communicative Competence in L2 Group Work* = .673, *Positive Beliefs about the Value of Group Work* = .218, *Negative Traditional Instruction Orientation* = .700, *Beliefs of Group Work Usefulness* = .803, *Willingness to Communicate in L2 Group Work* = .028, and *Readiness for L2 Group Work* = .727). Thus, the homogeneity of variance assumption was met. As indicated above, the cell sizes were extremely unequal. However, SPSS GML default deals with this problem by employing the Type III sum-of-squares method (SPSS 11.0 User's Guide, 2001, p. 303).

#### *2 × 2 ANOVA Results for Readiness for L2 Group Work (Questionnaire 1)*

A  $2 \times 2$  ANOVA was conducted to investigate group differences for *Readiness for L2 Group Work*. The alpha level was set at .011 after using the Bonferroni adjustment described above. The results of the ANOVA in the level/course difference on *Readiness for L2 Group Work* are shown in Table 16. There was a statistically significant main effect for Course ( $F = 19.248, df = 1, p < .001$ ), but no statistically significant main effect for Level ( $F = .342, df = 1, p = .559$ ). However, there was a statistically significant interaction between Level and Course ( $F = 7.596, df = 1, p = .006$ ). As Table 15 shows, among the LAC students, those with higher English proficiency had higher *Readiness for L2 Group Work*, while among COM students, the opposite occurred, and the students

with lower English proficiency displayed a higher level of *Readiness for L2 Group Work* (Figure 4). The strength of association was estimated using  $\eta^2$  in order to determine the

Table 16.  $2 \times 2$  ANOVA Results for *Readiness for L2 Group Work (Questionnaire 1)*

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	.269	1	.269	.342	.559	.001	.026
Course	19.248	1	19.248	24.436	.000*	.038	.992
Level $\times$ Course	5.983	1	5.983	7.596	.006*	.012	.582
Error	489.160	621	.788				

Note. <sup>a</sup>Computed using alpha = .011, R Squared = .071 (Adjusted R Squared = .067), \* $p < .011$ .

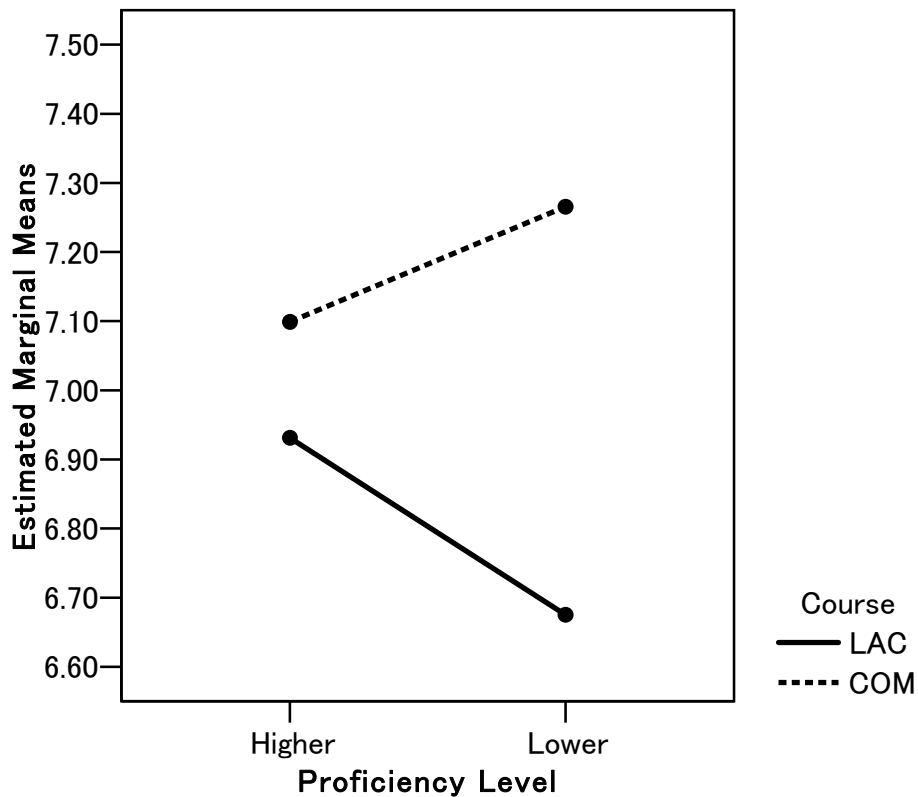


Figure 4. Interaction of level and course for *Readiness for L2 Group Work (Questionnaire 1)*. LAC = Language and Culture course; COM = Communication course.

proportion of variance in the DV that was attributable to the effect of the IV. The proportion of variance of the main effect for Course accounted for 3.8% of the variance in the dependent variable. Power for the main effect for Course was .992. The effect size (Cohen's  $d$ ) for the COM over LAC was .49 (using the average  $SD$ ) and .50 (using the control group's  $SD$ ), which was a moderate effect according to Cohen's criteria (1988). Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .09 (using the average  $SD$  and control the control group's  $SD$ ), which was very small.

#### *2 × 2 ANOVA Results for the Six Factors (Questionnaire 1)*

Six  $2 \times 2$  ANOVAs were conducted. The alpha level was set at .011 after using the Bonferroni adjustment described above. The results of the ANOVA in the level/course difference on *Communication Apprehension in L2 Group Work* are shown in Table 17. There was a statistically significant main effect for Course ( $F = 19.976, df = 1, p < .001$ ), but not a statistically significant main effect for Level ( $F = 1.846, df = 1, p = .175$ ). However, there was a statistically significant interaction between Level and Course ( $F = 7.184, df = 1, p = .008$ ). Among the LAC students, those with higher English proficiency had lower communication apprehension, while among COM students, the opposite occurred, and the students with higher English proficiency displayed a higher level of communication apprehension (Figure 5). The strength of association was estimated using  $\eta^2$  in order to determine the proportion of variance in the DV that was attributable to the effect. The proportion of variance of the main effect for Course accounted for 3.1%.

Table 17.  $2 \times 2$  ANOVA Results for Communication Apprehension in L2 Group Work (Questionnaire 1)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	1.058	1	1.058	1.846	.175	.003	.118
Course	11.450	1	11.450	19.976	.000*	.031	.972
Level $\times$ Course	4.118	1	4.118	7.184	.008*	.011	.552
Error	355.947	621	.573				

Note. <sup>a</sup>Computed using alpha = .011, R Squared = .061 (Adjusted R Squared = .056), \* $p < .011$ .

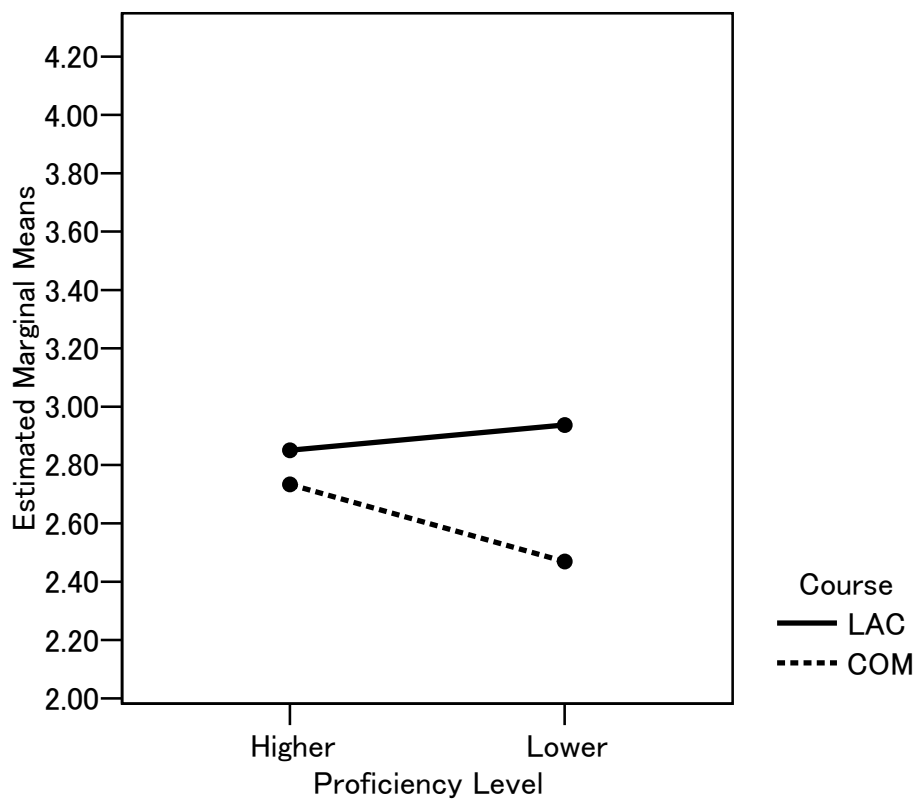


Figure 5. Interaction of Level and Course for Communication Apprehension in L2 Group Work (Questionnaire 1). LAC = Language and Culture course; COM = Communication course.

Power for the main effect for Course was .943. The effect size (Cohen's  $d$ ) for the COM over LAC was -.45 (using the average  $SD$  and the control group's  $SD$ ), which was close



to a moderate effect (.50) according to Cohen's criteria (1988). Cohen's *d* for the higher proficiency students over the lower proficiency students was .11 (using the average *SD* and the control group's *SD*), which was very small.

The results of the ANOVA in the level/course difference for *Self-perceived Communicative Competence in L2 Group Work* are shown in Table 18. There was a significant main effect both for the level ( $F = 16.161, df = 1, p < .001$ ) and the course ( $F = 12.680, df = 1, p < .001$ ). There was no statistically significant interaction between the level and the course. The proportion of variance ( $\eta^2$ ) of the main effect for Level was 2.5% and that for Course was 2.0%. The effect size (Cohen's *d*) for COM over LAC was .34 (using the average *SD*) and .35 (using the control group's *SD*), which was small. Cohen's *d* for the higher proficiency students over the lower proficiency students was .05 (using both the average *SD* and the control group's *SD*).

Table 18.  $2 \times 2$  ANOVA Results for *Self-perceived Communicative Competence in L2 Group Work (Questionnaire 1)*

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$	Observed Power <sup>a</sup>
Level	6.414	1	6.414	16.161	.000*	.025	.929
Course	5.032	1	5.032	12.680	.000*	.020	.843
Level $\times$ Course	1.066	1	1.066	2.685	.102	.004	.182
Error	246.456	621	.397				

Note. <sup>a</sup>Computed using alpha = .011, *R Squared* = .062 (Adjusted *R Squared* = .057), \* $p < .011$ .

Table 19 shows the results of the ANOVA in the level/course difference for *Positive Beliefs about the Value of Group Work*. There was no statistically significant main effect for either Level ( $F = 2.912, df = 1, p = .088$ ) or Course ( $F = 12.680, df = 1, p = .037$ ) and

no statistically significant interaction between Level and Course. The effect size (Cohen's *d*) for COM over LAC was .23 (using both the average *SD* and the control group's *SD*), which was small. Cohen's *d* for the higher proficiency students over the lower proficiency students was very small at -.12 (using both the average *SD* and the control group's *SD*).

Table 19.  $2 \times 2$  ANOVA Results for Positive Beliefs about the Value of Group Work (Questionnaire 1)

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$	Observed Power <sup>a</sup>
Level	1.177	1	1.177	2.912	.088	.005	.200
Course	1.766	1	1.766	4.368	.037	.007	.323
Level $\times$ Course	.945	1	.945	2.337	.127	.004	.154
Error	251.056	621	.404				

Note. <sup>a</sup>Computed using alpha = .011, *R Squared* = .019 (Adjusted *R Squared* = .014).

Table 20 shows the results of the ANOVA in the level/course difference for *Negative Traditional Instruction Orientation*. There was a statistically significant main effect for Course ( $F = 11.145$ ,  $df = 1$ ,  $p = .001$ ), but no statistically significant main effect for Level ( $F = 3.402$ ,  $df = 1$ ,  $p = .066$ ) or for the interaction between Level and Course ( $F = 3.231$ ,  $df = 1$ ,  $p = .073$ ). The proportion of variance ( $\eta^2$ ) of the main effect for Course was 1.8%. Cohen's *d* was .33 (using the average *SD*) and .34 (using the control group's *SD*), which were small effects. Cohen's *d* for the higher proficiency students over lower proficiency students was .18 (using the average *SD*) and .19 (using the control group's *SD*).

Table 20.  $2 \times 2$  ANOVA Results for Negative Traditional Instruction Orientation (Questionnaire 1)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	1.402	1	1.402	3.402	.066	.005	.241
Course	4.593	1	4.593	11.145	.001*	.018	.784
Level $\times$ Course	1.332	1	1.332	3.231	.073	.005	.227
Error	255.934	621	.412				

Note. <sup>a</sup>Computed using alpha = .011, R Squared = .040 (Adjusted R Squared = .035), \*  $p < .011$ .

Table 21 presents the results of the ANOVA in the level/course difference for *Beliefs of Group Work Usefulness*. No statistically significant differences were found for the main effect for Level ( $F = 2.522$ ,  $df = 1$ ,  $p = .113$ ), for Course ( $F = 6.177$ ,  $df = 1$ ,  $p = .013$ ), or for the interaction between Level and Course ( $F = 1.520$ ,  $df = 1$ ,  $p = .218$ ). Cohen's  $d$  for COM over LAC (Cohen's  $d$ ) was .09 (using the average  $SD$ ) and .10 (using the control group's  $SD$ ). Cohen's  $d$  for higher proficiency students over lower proficiency students was -.12 (using the average  $SD$  and the control group's  $SD$ ).

Table 21.  $2 \times 2$  ANOVA Results for Beliefs of Group Work Usefulness (Questionnaire 1)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	.637	1	.637	2.522	.113	.004	.169
Course	1.561	1	1.561	6.177	.013	.010	.475
Level $\times$ Course	.384	1	.384	1.520	.218	.002	.095
Error	156.885	621	.253				

Note. <sup>a</sup>Computed using alpha = .011, R Squared = .020 (Adjusted R Squared = .016).

Table 22 shows the results of the ANOVA for *Willingness to Communicate in L2 Group Work*. There was a statistically significant difference for the main effect for Course ( $F = 13.925$ ,  $df = 1$ ,  $p < .001$ ), but no statistically significant effect for Level ( $F = 6.085$ ,  $df = 1$ ,  $p < .014$ ) or for the interaction of Level and Course ( $F = .236$ ,  $df = 1$ ,  $p < .627$ ). The main effect for Course accounted for 2.2% of the variance ( $\eta^2$ ). Cohen's  $d$  for COM over LAC was .33 (using the average  $SD$ ) and .32 (using the control group's  $SD$ ). Cohen's  $d$  for higher proficiency students over lower proficiency students was .22 (using the average  $SD$ ) and .23 (using the control group's  $SD$ ).

Table 22.  $2 \times 2$  ANOVA Results for *Willingness to Communicate in L2 Group Work* (Questionnaire 1)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	3.911	1	3.911	6.085	.014	.010	.467
Course	8.950	1	8.950	13.925	.000*	.022	.881
Level $\times$ Course	.152	1	.152	.236	.627	.000	.021
Error	399.157	621	.643				

Note. <sup>a</sup>Computed using alpha = .011,  $R$  Squared = .037 (Adjusted  $R$  Squared = .033), \* $p < .011$ .

In summary, upon entering the university, the students in the COM course displayed a statistically significant higher degree of *Readiness for L2 Group Work* than those in the LAC course. However, there was not a statistically significant difference between the lower and higher proficiency students for *Readiness for L2 Group Work*. Statistically significant differences were also found for *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, and *Willingness to*

*Communicate in L2 Group Work*, with the COM students having less communication apprehension, viewing themselves as more communicatively competent, and being more willing to communicate in L2 group work. On the other hand, those groups were not significantly different in their beliefs about group work, except that the COM students had higher *Negative Traditional Instruction Orientation*. Higher proficiency students considered themselves more communicatively competent than the lower proficiency students to a statistically significant degree. These results indicate that as far as self-perceived communicative competence is concerned, higher proficiency students and the COM students viewed themselves as being more communicatively competent in L2 group work. However, the students did not differ according to their proficiency level for the other factors. Those who chose the COM course were more positive about L2 group work in general at the onset of instruction.

### *Questionnaire 2*

#### *2 × 2 ANOVA Assumptions for Questionnaire 2*

The same analytic procedure described above was adopted for the results of Questionnaire 2 ( $N = 609$ ). First, the assumptions of factorial ANOVAs were checked. Descriptive statistics within cells were obtained, and the raw scores were transformed to  $z$ -scores in order to identify univariate outliers. Eight outliers with  $z$ -scores in excess of  $\pm 3.29$  were detected, leaving 601 cases. Descriptive statistics for each cell were calculated again (Table 23). This time no univariate outliers were identified. The histogram check

Table 23. *Descriptive Statistics for Each Cell after Excluding Univariate Outliers (Questionnaire 2, Level × Course)*

Level	Course	Var	n	M	SE	95% CI		SD	Skew	SES	Kurt	SEK
						Upper limit	Lower limit					
Higher	LAC	CA	122	2.51	.06	2.66	2.42	.65	.04	.22	-.64	.43
		SPCC	122	3.02	.06	3.14	2.88	.72	-.17	.22	.11	.43
		PBVGW	122	3.99	.06	4.10	3.83	.70	-.39	.22	-.17	.43
		NTIO	122	3.83	.05	3.91	3.67	.58	-.54	.22	.23	.43
		BGWU	122	3.87	.04	3.95	3.77	.49	-.14	.22	.20	.43
		WTC	122	3.31	.08	3.45	3.15	.83	-.23	.22	.25	.43
		RGW	122	7.15	.08	7.30	7.00	.86	-.01	.22	-.01	.44
Higher	COM	CA	78	2.42	.08	2.59	2.28	.70	.11	.27	.10	.54
		SPCC	78	3.12	.09	3.32	2.96	.81	.25	.27	.28	.54
		PBVGW	78	3.82	.08	3.99	3.67	.73	.08	.27	-.36	.54
		NTIO	78	3.85	.07	3.97	3.68	.59	-.07	.27	-.33	.54
		BGWU	78	3.94	.06	4.06	3.83	.52	.25	.27	.07	.54
		WTC	78	3.49	.09	3.66	3.32	.76	.26	.27	.05	.54
		RGW	78	7.22	.11	7.27	7.01	.96	.30	.27	.27	.54
Lower	LAC	CA	241	2.58	.05	2.49	2.67	.74	.17	.16	-.21	.31
		SPCC	241	2.57	.05	2.48	2.67	.76	.12	.16	.14	.31
		PBVGW	241	3.82	.05	3.71	3.91	.79	-.42	.16	.16	.31
		NTIO	241	3.67	.04	3.59	3.76	.64	-.41	.16	.32	.31
		BGWU	241	3.81	.03	3.71	3.86	.53	.23	.16	-.22	.31
		WTC	241	2.84	.05	2.75	2.97	.85	.10	.16	.17	.31
		RGW	241	6.76	.06	6.88	6.65	.89	.16	.16	.71	.31
Lower	COM	CA	160	2.18	.05	2.28	2.07	.66	.16	.19	-.74	.38
		SPCC	160	3.02	.06	3.13	2.89	.76	.37	.19	.34	.38
		PBVGW	160	4.12	.06	4.22	3.98	.75	-.61	.19	.01	.38
		NTIO	160	3.94	.05	4.05	3.84	.67	-.43	.19	-.22	.38
		BGWU	160	3.92	.05	4.00	3.81	.58	-.07	.19	-.15	.38
		WTC	160	3.25	.06	3.35	3.11	.76	.15	.19	.11	.38
		RGW	160	7.42	.08	7.56	7.44	.95	.20	.19	-.10	.38

*Note.* N = 601. LAC = Language and Culture course; COM = Communication Course; Var = variable; CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; WTC = *Willingness to Communicate in L2 Group Work*; RGW = *Readiness for L2 Group Work*; Skew = skewness; Kurt = kurtosis.

did not reveal any non-normality. The significance levels of Levene's test of equality of error variances were: *Communication Apprehension in L2 Group Work* = .394, *Self-perceived Communicative Competence in L2 Group Work* = .849, *Positive Beliefs about the Value of Group Work* = .513, *Negative Traditional Instruction Orientation* = .315, *Beliefs of Group Work Usefulness* = .215, *Willingness to Communicate in L2 Group Work* = .391, and *Readiness for L2 Group Work* = .583; therefore, the homogeneity of variance assumption was met. Using the Bonferroni method described above, the alpha level was set at .017.

#### *2 × 2 ANOVA Results for Readiness for L2 Group Work (Questionnaire 2)*

A 2 × 2 ANOVA was conducted to investigate group differences for *Readiness for L2 Group Work*. The independent variables were the course (2 levels: COM and LAC) and proficiency (2 levels: higher and lower) and the dependent variable was the mean of the scores. The alpha level was set at .017 after using the Bonferroni adjustment described above. The results of the ANOVA in the level/course difference are shown in Table 24. There was a statistically significant main effect for Course ( $F = 20.285$ ,  $df = 1$ ,  $p < .001$ ), no statistically significant main effect for Level ( $F = 1.436$ ,  $df = 1$ ,  $p = .231$ ), and a statistically significant interaction between Level and Course ( $F = 12.824$ ,  $df = 1$ ,  $p < .001$ ). As Table 23 shows, among the LAC students, those with higher English proficiency had higher *Readiness for L2 Group Work*, while among the COM students,

the opposite occurred; the students with lower English proficiency displayed a higher level of *Readiness for L2 Group Work* (Figure 6). The strength of association was estimated using  $\eta^2$  in order to determine the proportion of variance in the DV that was attributable to the effect of the IV.

Table 24.  $2 \times 2$  ANOVA Results for Readiness for L2 Group Work (Questionnaire 2)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	1.192	1	1.192	1.436	.231	.002	.117
Course	16.834	1	16.834	20.285	.000*	.033	.982
Level $\times$ Course	10.642	1	10.642	12.824	.000*	.021	.882
Error	495.428	597	.830				

Note. <sup>a</sup>Computed using alpha = .017, R Squared = .082 (Adjusted R Squared = .078), \* $p < .017$ .

The main effect for Course accounted for 3.3% of the variance. Power for the main effect for Course was .982. The effect size (Cohen's  $d$ ) for the COM over the LAC was .48 (using the average  $SD$ ) and .51 (using the control group's  $SD$ ), which was a moderate effect. Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .16 (using the average  $SD$  and the control group's  $SD$ ), which was very small.



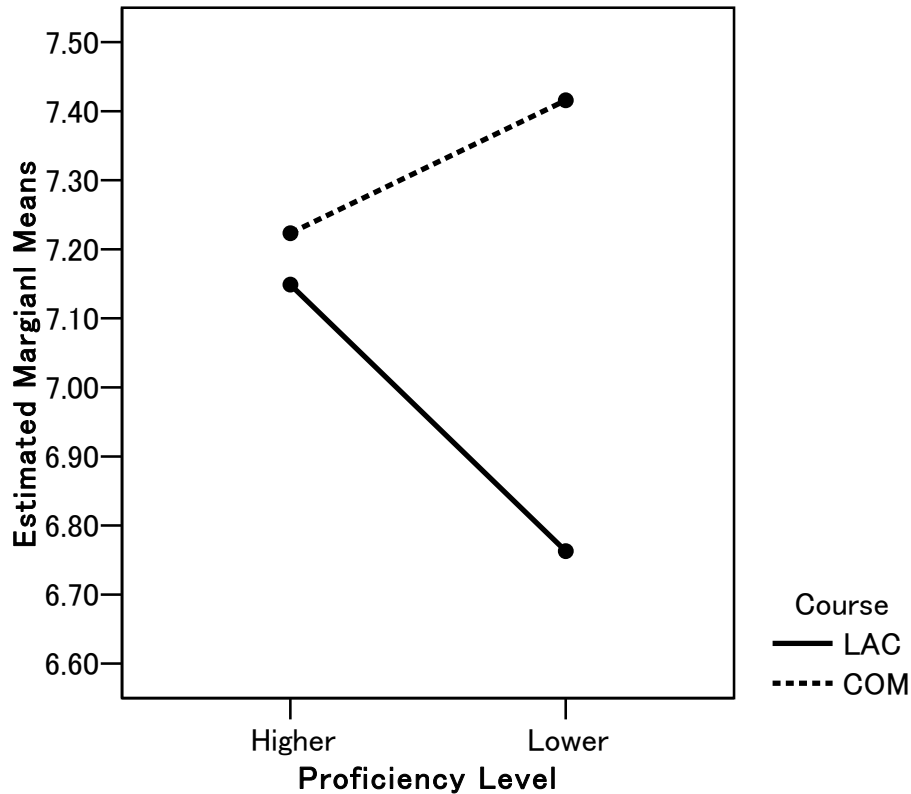


Figure 6. Interaction of level and course for *Readiness for L2 Group Work (Questionnaire 2)*. LAC = Language and Culture course; COM = Communication course.

*2 × 2 ANOVA Results for the Six Factors (Questionnaire 2)*

The ANOVA results for the level/course difference on *Communication Apprehension in L2 Group Work* are shown in Table 25. There was a statistically significant main effect for Course ( $F = 16.262, df = 1, p < .001$ ), no significant effect for Level ( $F = 2.060, df = 1, p = .152$ ), and a statistically significant interaction between Level and Course ( $F = 6.549, df = 1, p = .011$ ). Figure 7 shows that the LAC students and the COM students displayed opposite tendencies. Table 23 shows that the higher proficiency LAC students had slightly lower *Communication Apprehension in L2 Group*

*Work* ( $M = 2.51$ ) than those with lower proficiency ( $M = 2.58$ ). On the other hand, the lower proficiency COM students ( $M = 2.18$ ) showed a much lower level of *Communication Apprehension in L2 Group Work* than those with higher proficiency ( $M = 2.42$ ). The strength of association was estimated using  $\eta^2$  in order to determine the proportion of variance in the DV that was attributable to the effect of the IV. The main effect for Course accounted for 2.7% of the variance in the dependent variable. Cohen's  $d$  for the COM over the LAC was -.42 (using the average  $SD$ ) and -.43 (using the control group's  $SD$ ). Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .08 (using the average  $SD$ ) and .09 (using the control group's  $SD$ ).

Table 25.  $2 \times 2$  ANOVA Results for *Communication Apprehension in L2 Group Work* (Questionnaire 2)

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$	Observed Power <sup>a</sup>
Level	.994	1	.994	2.060	.152	.003	.170
Course	7.844	1	7.844	16.262	.000*	.027	.949
Level $\times$ Course	3.159	1	3.159	6.549	.011*	.011	.566
Error	287.957	597	.482				

Note. <sup>a</sup>Computed using alpha = .017,  $R$  Squared = .055 (Adjusted  $R$  Squared = .050), \*  $p < .017$ .

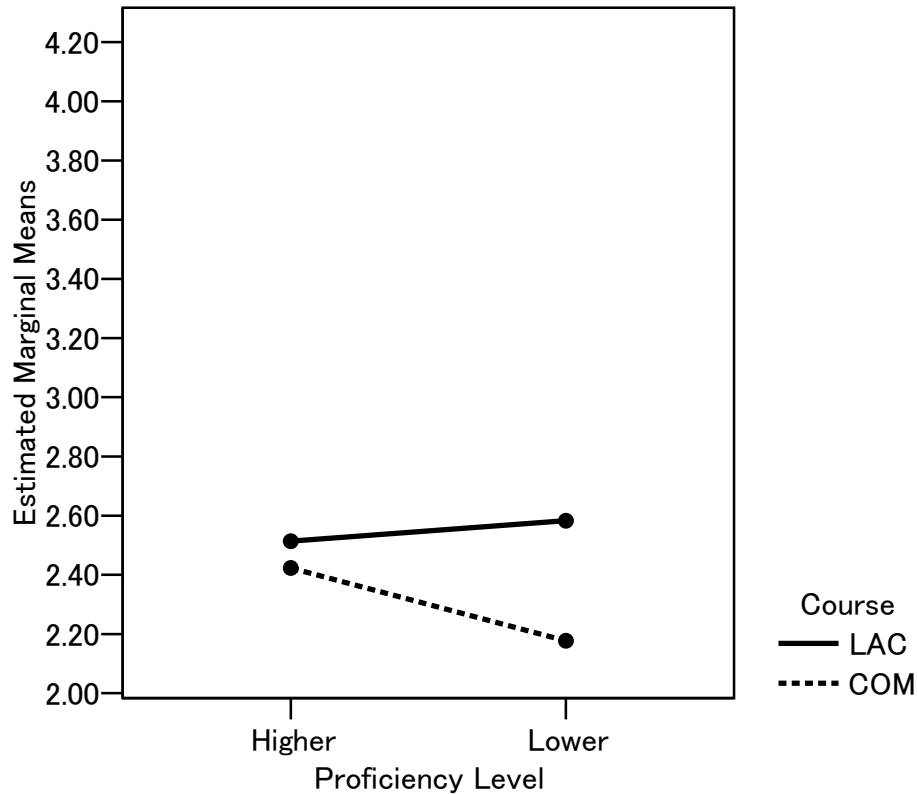


Figure 7. Interaction of level and course for *Communication Apprehension in L2 Group Work (Questionnaire 2)*. LAC = Language and Culture course; COM = Communication course.

The results of the ANOVA for the level/course differences for *Self-perceived Communicative Competence in L2 Group Work* are shown in Table 26. A statistically significant main effect was found for Level ( $F = 16.629, df = 1, p < .001$ ), Course ( $F = 17.427, df = 1, p < .001$ ), and the interaction between the level and the course ( $F = 17.427, df = 1, p < .001$ ). As Figure 8 and Table 23 show, the lower proficiency LAC students ( $M = 2.57$ ) exhibited a sharp decline in *Self-perceived Communicative Competence in L2 Group Work* compared with the higher proficiency LAC students ( $M = 3.02$ ), while the higher proficiency COM students ( $M = 3.12$ ) showed only slightly

higher *Self-perceived Communicative Competence in L2 Group Work* than the lower proficiency COM students (3.02).

Table 26.  $2 \times 2$  ANOVA Results for *Self-perceived Communicative Competence in L2 Group Work (Questionnaire 2)*

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	9.492	1	9.492	16.629	.000*	.027	.954
Course	9.948	1	9.948	17.427	.000*	.028	.962
Level $\times$ Course	3.846	1	3.846	6.737	.010*	.011	.580
Error	340.776	597	.571				

Note. <sup>a</sup>Computed using alpha = .017, R Squared = .088 (Adjusted R Squared = .083), \* $p < .017$ .

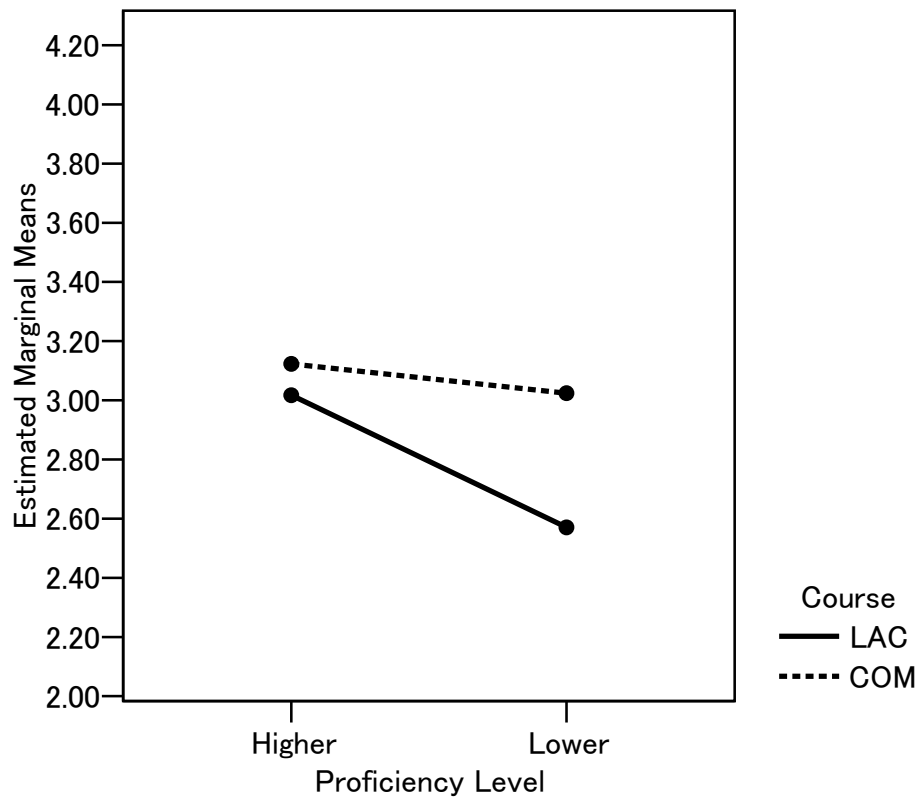


Figure 8. Interaction of level and course for *Self-Perceived Communicative Competence in L2 Group Work (Questionnaire 2)*. LAC = Language and Culture course; COM = Communication course.

The main effect for Level accounted for 2.7% of the variance in the dependent variable and for Course accounted for 2.8% of the variance. Cohen's *d* for COM over LAC was .42 (using the average *SD*) and .43 (using the control group's *SD*). Cohen's *d* for the higher proficiency students over the lower proficiency students was .39 (using the average *SD*) and .41 (using the control group's *SD*).

Table 27 shows the results of the  $2 \times 2$  ANOVA for the level/course differences for *Positive Beliefs about the Value of Group Work*. There was no statistically significant main effect for either Level ( $F = 2.912, df = 1, p = .088$ ) or Course ( $F = 12.680, df = 1, p = .037$ ); however, a statistically significant interaction effect was found between Level and Course ( $F = 12.156, df = 1, p = .001$ ). Figure 9 graphically displays this interaction.

Table 27.  $2 \times 2$  ANOVA Results for *Positive Beliefs about the Value of Group Work* (Questionnaire 2)

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$	Observed Power <sup>a</sup>
Level	.487	1	.487	.864	.353	.001	.073
Course	.539	1	.539	.956	.329	.002	.079
Level $\times$ Course	6.859	1	6.859	12.156	.001*	.020	.862
Error	336.835	597	.564				

Note. <sup>a</sup>Computed using alpha = .017, *R Squared* = .028 (Adjusted *R Squared* = .024), \* $p < .017$ .

The interaction effect accounted for 2.0% of the variance in the dependent variable. The lower proficiency COM students ( $M = 4.12$ , Table 23) showed a much higher level of *Positive Beliefs about the Value of Group Work* than the higher proficiency COM

students ( $M = 3.82$ ), while the higher proficiency LAC students had only slightly higher scores ( $M = 3.99$ ) than the lower proficiency LAC students ( $M = 3.82$ ). This may explain the lack of statistically significant main effects.

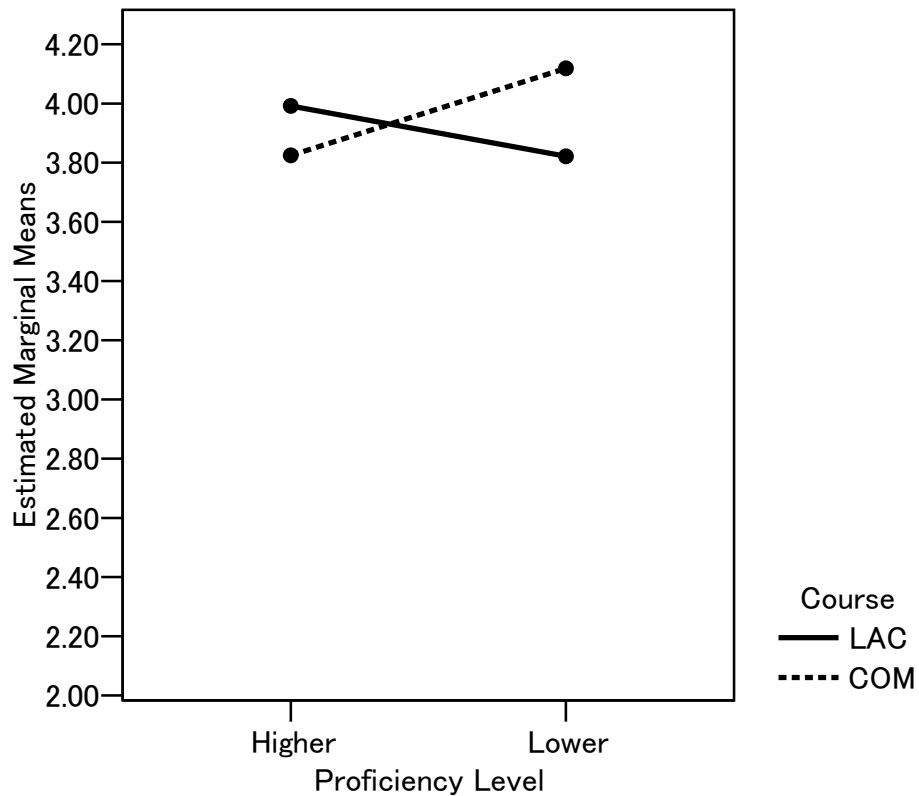


Figure 9. Interaction of level and course for *Positive Beliefs about the Value of Group Work (Questionnaire 2)*. LAC = Language and Culture course; COM = Communication course.

Cohen's  $d$  for COM over LAC was .19 (using the average  $SD$  and the control group's  $SD$ ). Cohen's  $d$  for higher proficiency students over lower proficiency students was -.02 (using the average  $SD$  and the control group's  $SD$ ).

Table 28 shows the results of the  $2 \times 2$  ANOVA for the level/course differences on *Negative Traditional Instruction Orientation*. There was a statistically significant main effect for Course ( $F = 6.606, p = .010$ ), but not for Level, or for the Level  $\times$  Course interaction. Cohen's  $d$  for COM over LAC was .29 (using the average  $SD$  and the control group's  $SD$ ). Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .09 (using the average  $SD$ ) and .10 (using the control group's  $SD$ ).

Table 28.  $2 \times 2$  ANOVA Results for *Negative Traditional Instruction Orientation* (Questionnaire 2)

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$	Observed Power <sup>a</sup>
Level	.149	1	.149	.376	.540	.001	.039
Course	2.619	1	2.619	6.606	.010*	.011	.570
Level $\times$ Course	1.789	1	1.789	4.514	.034	.008	.395
Error	236.640	597	.396				

Note. <sup>a</sup>Computed using alpha = .017,  $R$  Squared = .029 (Adjusted  $R$  Squared = .024), \* $p < .017$ .

Table 29 shows the results of the  $2 \times 2$  ANOVA results for the level/course differences for *Beliefs of Group Work Usefulness*. No statistically significant differences were found for the main effects for Course and Level, nor for the Course-Level interaction. Cohen's  $d$  for COM over LAC was .18 (using the average  $SD$ ) and .19 (using the control group's  $SD$ ). Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .06 (using the average  $SD$ ) and .07 (using the control group's  $SD$ ).

Table 29.  $2 \times 2$  ANOVA Results for Beliefs of Group Work Usefulness (Questionnaire 2)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	.213	1	.213	.747	.388	.001	.064
Course	1.049	1	1.049	3.687	.055	.006	.319
Level $\times$ Course	.049	1	.049	.174	.677	.000	.027
Error	169.903	597	.285				

Note. <sup>a</sup>Computed using alpha = .017, R Squared = .010 (Adjusted R Squared = .005).

As is clear from the ANOVA results for *Willingness to Communicate in L2 Group Work* (Table 30), statistically significant differences were found for the main effect of Level ( $F = 24.701$ ,  $df = 1$ ,  $p < .001$ ) and Course ( $F = 16.026$ ,  $df = 1$ ,  $p < .001$ ); however, no statistically significant effect was found for the interaction between Level and Course ( $F = 2.479$ ,  $df = 1$ ,  $p = .116$ ). The main effect for Level and Course accounted for 4.0% and 2.6% of the variance in the DV, respectively. Cohen's  $d$  for COM over LAC was .38 (using the average  $SD$ ) and .37 (using the control group's  $SD$ ). Cohen's  $d$  for the higher proficiency students over the lower proficiency students was .45 (using the average  $SD$ ) and .47 (using the control group's  $SD$ ).

Table 30.  $2 \times 2$  ANOVA Results for Willingness to Communicate in L2 Group Work (Questionnaire 2)

Source	SS	df	MS	F	p	$\eta^2$	Observed Power <sup>a</sup>
Level	16.259	1	16.259	24.701	.000*	.040	.995
Course	10.549	1	10.549	16.026	.000*	.026	.946
Level $\times$ Course	1.632	1	1.632	2.479	.116	.004	.207
Error	392.969	597	.658				

Note. <sup>a</sup>Computed using alpha = .017, R Squared = .084 (Adjusted R Squared = .079), \* $p < .017$ .



In summary, after one semester of English instruction, the COM students' *Readiness for L2 Group Work* was higher than the LAC students' to a statistically significant degree; however no proficiency level difference was observed. There was an interaction effect in Level and Course. Looking at the six components of the questionnaire, it was found that the students in the LAC course and the COM course differed in terms of their *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Negative Traditional Instruction Orientation*, and *Willingness to Communicate in L2 Group Work*. The COM students showed less communication apprehension, viewed themselves as more communicatively competent, believed that teacher-fronted traditional instruction was less effective than group work, and were more willing to communicate in L2 group work. On the other hand, the students in the two courses showed no statistically significant differences in their beliefs about the value of cooperation and usefulness of group work. There was a statistically significant interaction effect between Level and Course for *Positive Beliefs about the Value of Group Work*, *Communication Apprehension in L2 Group Work*, and *Self-perceived Communicative Competence in L2 Group Work*.

The higher proficiency students considered themselves significantly more communicatively competent and more willing to communicate in L2 group work than the lower proficiency students. These results show that as far as *Self-perceived Communicative Competence in L2 Group Work* and *Willingness to Communicate in L2 Group Work* are concerned, the higher proficiency students and the COM students

viewed themselves as more communicatively competent in L2 group work and were more willing to communicate in L2 group work than the lower proficiency LAC students. However, for the other variables, the participants did not differ according to proficiency level. Comparing the Questionnaire 2 results with the Questionnaire 1 results, the difference between the higher and lower proficiency students for *Willingness to Communicate in L2 Group Work* was statistically significant only on Questionnaire 2. Therefore, it appears that the gap in *Willingness to Communicate in L2 Group Work* between the more proficient students and the less proficient students widened after one semester of the English instruction. Although the descriptive statistics show that the COM students were more positive about L2 group work in general at the beginning (see Table 15) and at the end (see Table 23) of the course, the difference between the LAC students and the COM students on each construct did not change after one semester of English instruction.

### Research Question 3

The third research question was “To what degree does the students’ *Readiness for L2 Group Work* change due to the type of course and proficiency grouping between the beginning and the end of one semester?” The within-subjects IV was time of administration (2 levels: before and after the course), the between-subjects IVs were Course (2 levels) and Proficiency (2 levels). The dependent variable was *Readiness for L2 Group Work*, which was a composite score of five constructs (*Communication*

*Apprehension in L2 Group Work, Self-perceived Communicative Competence in L2 Group Work, Positive Beliefs about the Value of Group Work, Negative Traditional Instruction Orientation, and Beliefs of Group Work Usefulness*), and operationally defined as follows:

$$RGW = (M \text{ of PBVGW} + M \text{ of NTIO} + M \text{ of BGWU}) / 3 + (M \text{ of CA-R} + M \text{ of SPCC}) / 2$$

The raw scores were used to calculate the means. CA-R indicates that the mean of *Communication Apprehension in L2 Group Work* was reverse coded.

#### *ANOVA Assumptions*

After conducting the factor analysis to check the validity of the questionnaires, data from 625 students from Questionnaire 1 and 609 students from Questionnaire 2 were used as the baseline data for this analysis. Because the two questionnaires were administered anonymously, 16 students ( $625 - 609 = 16$ ) were randomly deleted from Questionnaire 1, and 609 cases were examined for normal distribution within each cell. Two cases were identified as univariate outliers ( $\geq |3.29|$ ) and were eliminated from further analysis, leaving 607 cases. The skewness and kurtosis within the four cells were within two times the absolute value of the *SES/SEK* (Table 31) except for the lower proficiency LAC students at Time 2, which barely exceeded the value; however, because none of the histograms showed any non-normality, the assumption of normal distribution was met. Box's *M* test of equality of covariance (Box's  $M = 5.214$ ,  $F = .575$ ,  $p = .819$ )

assured the homogeneity of covariance and Levene's test of equality of error variances was not significant for either Questionnaire 1 ( $p = .885$ ) or Questionnaire 2 ( $p = .608$ ), assuring the homogeneity of variance assumption. The problem of unequal cell sizes was dealt with by SPSS default. Therefore, the assumptions for conducting a mixed between-within-subjects ANOVA were met.

Table 31. *Descriptive Statistics for Readiness for L2 Group Work*

Level	Course	Time	N	M	SE	95% CI		SD	Skew	SES	Kurt	SEK
						Upper limit	Lower limit					
Higher	LAC	1 <sup>a</sup>	122	6.92	.08	7.08	6.76	.89	.35	.22	-.32	.43
		2 <sup>b</sup>	122	7.13	.08	7.29	6.98	.86	.02	.22	-.02	.43
	COM	1 <sup>a</sup>	79	7.12	.10	7.33	6.92	.91	-.20	.27	-.59	.53
		2 <sup>b</sup>	79	7.22	.11	7.43	7.00	.96	.32	.27	.31	.53
	Total	1 <sup>a</sup>	201	7.00	.06	7.12	6.87	.90	.13	.17	-.56	.34
		2 <sup>b</sup>	201	7.17	.06	7.29	7.04	.90	.18	.17	.18	.34
Lower	LAC	1 <sup>a</sup>	245	6.65	.06	6.77	6.54	.92	.01	.16	.23	.31
		2 <sup>b</sup>	245	6.75	.06	6.87	6.64	.91	.11	.16	.65	.31
	COM	1 <sup>a</sup>	161	7.24	.07	7.38	7.11	.88	-.10	.19	-.43	.38
		2 <sup>b</sup>	161	7.40	.08	7.55	7.25	.97	.11	.19	.02	.38
	Total	1 <sup>a</sup>	406	6.89	.05	6.98	6.80	.94	-.05	.12	-.08	.24
		2 <sup>b</sup>	406	7.01	.05	7.11	6.91	.99	.17	.12	.30	.24
Total	LAC	1 <sup>a</sup>	367	6.74	.05	6.84	6.65	.92	.10	.13	.13	.25
		2 <sup>b</sup>	367	6.88	.05	6.97	6.79	.91	.05	.13	.38	.25
	COM	1 <sup>a</sup>	240	7.20	.06	7.32	7.09	.89	-.14	.16	-.48	.31
		2 <sup>b</sup>	240	7.34	.06	7.46	7.22	.97	.18	.16	.05	.31
	Total	1 <sup>a</sup>	607	6.92	.04	7.00	6.85	.93	-.01	.10	-.20	.20
		2 <sup>b</sup>	607	7.06	.04	7.14	6.99	.96	.15	.10	.27	.20

*Note.* LAC = Language and Culture course; COM = Communication course; <sup>a</sup>Time 1 = Questionnaire 1 administered at the beginning of the course; <sup>b</sup>Time 2 = Questionnaire 2 administered at the end of the course; Skew = skewness; Kurt = kurtosis.

### *Mixed Between-Within-Subjects ANOVA Results*

A mixed between-within-subjects ANOVA was conducted in order to investigate differences in the Questionnaire 1 results (administered at the beginning of the course) and Questionnaire 2 results (administered at the end of the course). The data used for this mixed between-within-subjects ANOVA were considered to be in a different family from those for the other ANOVA tests. Therefore, the  $\alpha$  level was set at .05 and a Bonferroni adjustment was not applied.

Table 32 shows the results of the mixed between-within-subjects ANOVA. The results indicated a statistically significant main effect for Course ( $F = 42.087, p < .001$ ), and a significant interaction effect between Level and Course ( $F = 16.069, p < .001$ ); thus, the students in the two courses (LAC and COM) differed in their *Readiness for L2 Group Work*. The interaction effect was caused by the greater difference between the lower proficiency COM students and the lower proficiency LAC students in their *Readiness for L2 Group Work* in comparison with the higher proficiency students (Figure 10).

The main effect for Time was statistically significant ( $F = 6.715, p = .01$ ); thus, Time was a factor in the difference in students' *Readiness for L2 Group Work* regardless of the course and the level. However, the statistically significant difference within the Course factors and the lack of a statistically significant difference within the Level factors suggests that the statistically significant difference in Time was caused mainly by the difference in *Readiness for L2 Group Work* between the COM students and the LAC students.

Table 32. *Mixed Between-Within-Subjects ANOVA Results for the Pre- and Post-course Questionnaires*

Source	SS	df	MS	F	p	Partial $\eta^2$	Observed Power
Between subjects							
Level	1.864	1	1.864	2.110	.147	.003	.305
Course	37.177	1	37.177	42.087	.000*	.065	1.000
Level $\times$ Course	14.195	1	14.195	16.069	.000*	.026	.979
Error	532.656	603	.883				
Within subjects							
Time	5.246	1	5.246	6.715	.010*	.011	.735
Time $\times$ Level	.052	1	.052	.067	.796	.000	.058
Time $\times$ Course	.069	1	.069	.089	.766	.000	.068
Time $\times$ Level $\times$ Course	.523	1	.523	.670	.413	.001	.129
Error (Time)	471.070	603	.781				

\* $p < .05$ .

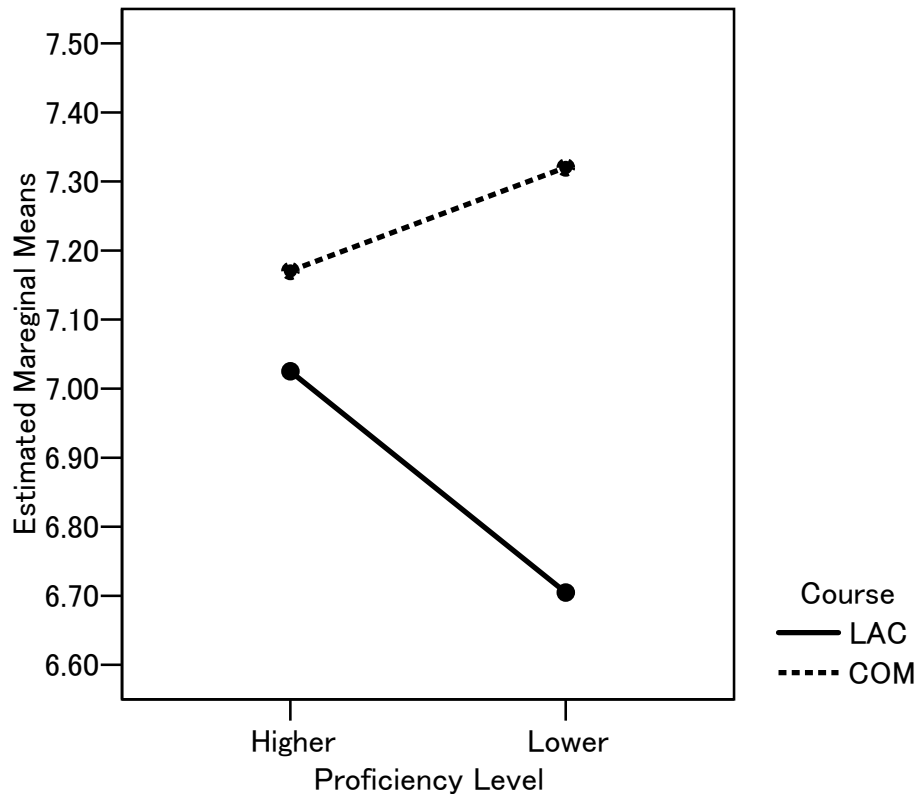


Figure 10. Interaction of course and level in *Readiness for L2 Group Work*. LAC = Language and Culture course; COM = Communication course.

Figure 11 shows changes in the *Readiness for L2 Group Work* in the higher and lower proficiency level groups. Both groups demonstrated more *Readiness for L2 Group Work* after one semester of English instruction. The higher proficiency students showed higher *Readiness for L2 Group Work* at the beginning of the course than the lower proficiency students, and the difference between the two groups increased slightly at the end of the course.

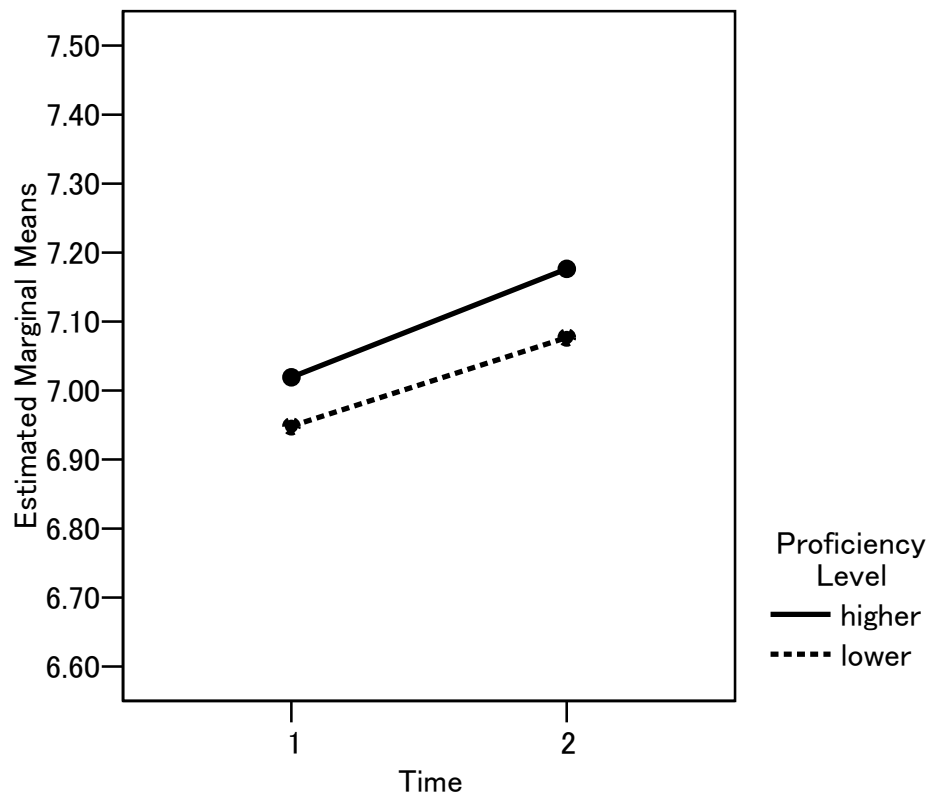
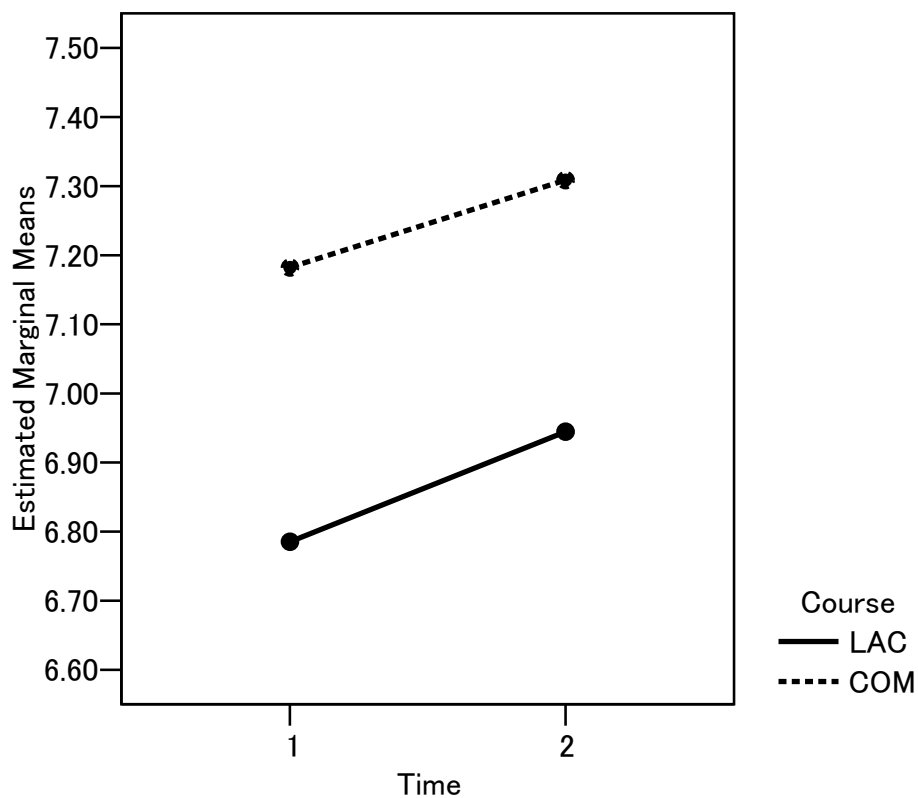


Figure 11. Changes in *Readiness for L2 Group Work* among the higher and lower proficiency students.

Figure 12 shows changes in *Readiness for L2 Group Work* between the students in the LAC and COM courses. Both groups exhibited higher readiness after one semester of instruction than at the beginning of the course. The COM students were higher than the LAC students in *Readiness for L2 Group Work* both at the beginning and at the end of the course, and the difference between them did not change.



*Figure 12.* Changes in *Readiness for L2 Group Work* among the students in the LAC and COM courses. LAC = Language and Culture course; COM = Communication course.

Next, in order to determine the proportion of variance in the dependent variable that was attributable to the main effect, the strength of association was estimated using partial



$\eta^2$ . As shown in Table 32, the proportion of variance accounted for by Course was 6.5%; for the interaction between Level and Course, 2.6%; and for Time, 1.1%.

In summary, the students improved their *Readiness for L2 Group Work* after one semester of English instruction. The higher proficiency students were more ready for L2 group work than the lower proficiency students both at the beginning and at the end of the course, but the difference increased slightly at the end of the course. The COM students were found to be more ready for L2 group work than their LAC counterparts, and the difference between them did not change after one semester of course work. The difference caused by course was larger than the difference attributable to proficiency level.

#### Research Question 4

Research Question 4 was “What are the relationships among *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative competence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*?”

#### *Pearson Correlation Coefficient Assumptions*

First, the assumptions of the Pearson product moment correlation coefficients were checked. Only Questionnaire 2 was used for this analysis because the wording of “*suru tsumorida* (be willing to)” used in Questionnaire 2 was more suitable to measure

*Willingness to Communicate in L2 Group Work*. The same 601 cases used for the factorial ANOVAs for Questionnaire 2 were used because the mean of each part of Questionnaire 2 was used in this correlational analysis. Along with the mean of each part, *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Readiness for L2 Group Work* were calculated using the following equations.

$$CC = (M \text{ of CA reversed} + M \text{ of SPCC}) / 2$$

$$BGW = (M \text{ of PBVGW} + M \text{ of NTIO} + M \text{ of BGWU}) / 3$$

$$RGW = CC + BGW$$

Note *Beliefs about Group Work* were initially operationally defined as the cumulative score of five beliefs measured by Questionnaire 1: (a) beliefs about the value of group work, (b) beliefs about the efficiency of group work, (c) beliefs about knowledge co-construction/peer-scaffolding in group work, (d) beliefs about relationships with other group members, and (e) beliefs about teacher/student roles in college English classrooms. However, when a factor analysis was conducted, only three belief factors were identified. Therefore, instead of the above five constructs, *Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness* were used to obtain *Beliefs about L2 Group Work* scores.

Descriptive statistics are presented in Table 33. No outliers ( $z \geq 3.29$ ) were detected. Although some of the skewness and kurtosis statistics exceeded two times the absolute value of the *SES/SEK*, histograms indicated that the distributions were reasonably normal.

Linearity was checked by examining the scatterplots of all combinations of the variables.

No curvilinear relationships were detected. Therefore, the assumptions were met.

Table 33. *Descriptive Statistics for Readiness for L2 Group Work and Willingness to Communicate in L2 Group Work Variables*

	<i>M</i>	<i>SE</i>	95% CI		<i>SD</i>	Skew	<i>SES</i>	Kurt	<i>SEK</i>
			Upper limit	Lower limit					
CA	2.44	.03	2.50	2.38	.71	-.16	.10	-.30	.20
SPCC	2.85	.03	2.92	2.79	.79	.13	.10	.19	.20
CC	3.21	.02	3.25	3.16	.60	.29	.10	.45	.20
PBVGW	3.94	.03	4.00	3.87	.76	-.40	.10	-.05	.20
NTIO	3.80	.03	3.85	3.75	.64	-.37	.10	.07	.20
BGWU	3.87	.02	3.91	3.83	.53	.08	.10	-.12	.20
BGW	3.87	.02	3.91	3.83	.52	-.17	.10	-.25	.20
RGW	7.07	.04	7.15	7.00	.95	.19	.10	.25	.20
WTC	3.13	.03	3.20	3.06	.85	-.02	.10	.10	.20

*Note.* *N* = 601. CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; CC = *Communication Confidence*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; BGW = *Beliefs about L2 Group Work*; RGW = *Readiness for L2 Group Work*; WTC = *Willingness to Communicate in L2 Group Work*; Skew = skewness; Kurt = kurtosis.

#### *Pearson Correlation Coefficient Results*

Pearson product moment correlation coefficients among the questionnaire parts were calculated for Questionnaire 2. The alpha level was set at .01. Table 34 shows the results. All the correlations were statistically significant at  $p = .01$  (one-tailed).

Among the communication confidence variables, *Communication Apprehension in L2 Group Work* had a weak association with *Self-perceived Communicative Competence in L2 Group Work* ( $r = -.28$ ) and *Willingness to Communicate in L2 Group Work* ( $r =$

-0.22). It is noteworthy that *Communication Apprehension in L2 Group Work* correlated more highly with the three belief variables (*Positive Beliefs about Value of Cooperation*:  $r = -.31$ , *Negative Traditional Instruction Orientation*:  $r = -.35$ , *Beliefs of Group Work Usefulness*:  $r = -.34$ , and the *Beliefs about Group Work*:  $r = -.41$ ) than with *Self-perceived Communicative Competence in L2 Group Work* ( $r = -.28$ ). *Communication Apprehension in L2 Group Work* had a strong negative association with *Communication Confidence in L2 Group Work* ( $r = -.77$ ) and *Readiness for L2 Group Work* ( $r = -.71$ ). *Self-perceived Communicative Competence in L2 Group Work* had a strong association with *Willingness to Communicate in L2 Group Work* ( $r = .71$ ) and a weak correlation with *Communication Apprehension in L2 Group Work* ( $r = -.28$ ), *Positive Beliefs about the Value of Group Work* ( $r = .26$ ), *Beliefs of Group Work Usefulness* ( $r = .33$ ) and *Beliefs about L2 Group Work* ( $r = .29$ ). Although the correlation with *Negative Traditional Instruction Orientation* ( $r = .11$ ) was statistically significant, considering that the large  $N$ -size yields statistical significance easily, there was a weak correlation between these two variables. *Self-perceived Communicative Competence in L2 Group Work* also had a strong association with *Communication Confidence in L2 Group Work* ( $r = .82$ ), and a moderate association with *Readiness for L2 Group Work* ( $r = .68$ ), both of which were higher-order constructs of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*.

Among the *Beliefs about L2 Group Work* constructs, *Positive Beliefs about the Value of Group Work* correlated moderately with *Beliefs of Group Work Usefulness* ( $r$

= .60) and weakly with *Negative Traditional Instruction Orientation* ( $r = .38$ ). It had a strong association with *Beliefs about L2 Group Work* ( $r = .85$ ) and a moderate association with *Readiness for L2 Group Work* ( $r = .69$ ). This is understandable because *Positive Beliefs about the Value of Group Work* constituted a part of *Beliefs about L2 Group Work* and *Readiness for L2 Group Work*. *Positive Beliefs about the Value of Group Work* correlated weakly with *Willingness to Communicate in L2 Group Work* ( $r = .35$ ).

*Negative Traditional Instruction Orientation* correlated moderately with *Beliefs of Group Work Usefulness* ( $r = .44$ ) and *Readiness for L2 Group Work* ( $r = .59$ ), strongly with *Beliefs about L2 Group Work* ( $r = .75$ ), and had almost no association with *Willingness to Communicate in L2 Group Work* ( $r = .16$ ). *Beliefs of Group Work Usefulness* strongly correlated with *Beliefs about L2 Group Work* ( $r = .82$ ) and *Readiness for L2 Group Work* ( $r = .71$ ). It also showed a moderate correlation with *Willingness to Communicate in L2 Group Work* ( $r = .42$ ).

*Willingness to Communicate in L2 Group Work* had the strongest association with *Self-perceived Communicative Competence in L2 Group Work* ( $r = .71$ ) among all the variables. This indicates that the more that students perceive themselves as communicatively competent in L2 group work, the more willing they are to communicate in L2 group work. *Willingness to Communicate in L2 Group Work* correlated more strongly with *Communication Confidence in L2 Group Work* ( $r = .60$ ) than with *Beliefs about L2 Group Work* ( $r = .38$ ), which had a weak association with *Willingness to Communicate in L2 Group Work*. *Willingness to Communicate in L2 Group Work* was

moderately associated with *Readiness for L2 Group Work* ( $r = .59$ ). Thus, the more ready the students were for L2 group work, the more willing they were to communicate in L2 group work. *Readiness for L2 Group Work* strongly correlated with both *Communication Confidence in L2 Group Work* ( $r = .87$ ) and *Beliefs about L2 Group Work* ( $r = .82$ ).

Table 34. *Intercorrelations among the Readiness for Group Work Variables and Willingness to Communicate in L2 Group Work*

	1	2	3	4	5	6	7	8	9
1. CA	—								
2. SPCC	-.28	—							
3. CC	-.77	.82	—						
4. PBVGW	-.31	.26	.36	—					
5. NTIO	-.35	.11	.28	.38	—				
6. BGWU	-.34	.33	.42	.60	.44	—			
7. BGW	-.41	.29	.43	.85	.75	.82	—		
8. RGW	-.71	.68	.87	.69	.59	.71	.82	—	
9. WTC	-.22	.71	.60	.35	.16	.42	.38	.59	—

*Note.* All correlations are significant at  $p < 0.01$  (1-tailed). CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; CC = *Communication Confidence in L2 Group work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; BGW = *Beliefs about L2 Group Work*; RGW = *Readiness for L2 Group Work*; WTC = *Willingness to Communicate in L2 Group Work*.

### Research Question 5

The fifth research question was “How does each component of students’ *Readiness for L2 Group Work* affect their *Willingness to Communicate in L2 Group Work*?” In order to answer this question, a structural equation model (SEM) was tested. SEM is useful for investigating how well a theoretical model explains the interrelations among a set of variables (Hu & Bentler, 1999).

### *The Hypothesized Model*

Using AMOS Version 5J, the relationships among *Self-perceived Communication Confidence in L2 Group Work* (a latent variable), *Beliefs about L2 Group Work* (a latent variable), and *Willingness to Communicate in L2 Group Work* (an observed variable) were examined. *Communication Confidence in L2 Group Work* consists of two indicators: *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*. *Beliefs about L2 Group Work* consists of three indicators: *Positive Beliefs about the Value of Communication*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*.

MacIntyre et al.'s (1998) heuristic model of *Willingness to Communicate* in L2 (see Figure 1 in Chapter 2) indicates that *Willingness to Communicate* (Layer 2) is directly affected by State Communicative Self-Confidence (consisting of “perceived competence” and “a lack of anxiety,” p. 549) and Desire to Communicate with Specific Person (Layer 3). However, their model was designed to account for *Willingness to Communicate* in the Canadian context, where English is taught as a second language, not a foreign language. In this study, English is a foreign language that is seldom used outside of English classrooms. Besides, the primary purpose is to investigate students’ *Willingness to Communicate in L2 Group Work* in English classes and not their willingness to use L2 in communicative situations outside classrooms.

Because of these differences, as Wen and Clément (2003) noted in their conceptualization of *Willingness to Communicate* in the Chinese context, it is not feasible to directly apply MacIntyre et al.'s (1998) model to the current situation.

Yashima (2002) investigated an L2 Communication Model in the Japanese EFL context by testing a structural equation model and found that *Willingness to Communicate in L2* in the Japanese context was directly affected by two latent variables: *L2 Communication Confidence*, as indicated by *Communication Anxiety in L2* and *Perceived Communication Competence in L2*, and *International Posture*. However, *Willingness to Communicate in L2* in her study was considered to be willingness to communicate outside of English classrooms. In this study, the focus is on *Willingness to Communicate in L2 Group Work*; therefore, *Beliefs about L2 Group Work*, rather than *International Posture*, is hypothesized to affect *Willingness to Communicate in L2 Group Work*. I also view beliefs as being relatively stable, not changing from class to class. On the other hand, beliefs are changeable over time; thus, it is not a complete trait. Therefore, *Beliefs about L2 Group Work* should be located in Layer 4 in MacIntyre et al.'s (1998) model. In this conceptualization, *Beliefs about L2 Group Work* indirectly affects *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*, which is affected by *Beliefs about L2 Group Work*.

Based on this idea, I developed a hypothetical model. The single-headed arrows in Figure 13 illustrate the hypothesis that *Beliefs about L2 Group Work* indirectly affects *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2*



*Group Work*, which has two indicator variables, *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*. *Beliefs about L2 Group Work* has three indicator variables, *Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*. Each indicator variable was specified by aggregating the values of all the items used in the measurement for each variable. Ovals in the model represent latent variables, while rectangles represent observed variables. The absence of a line connecting measured or latent variables implies the lack of a hypothesized direct effect.

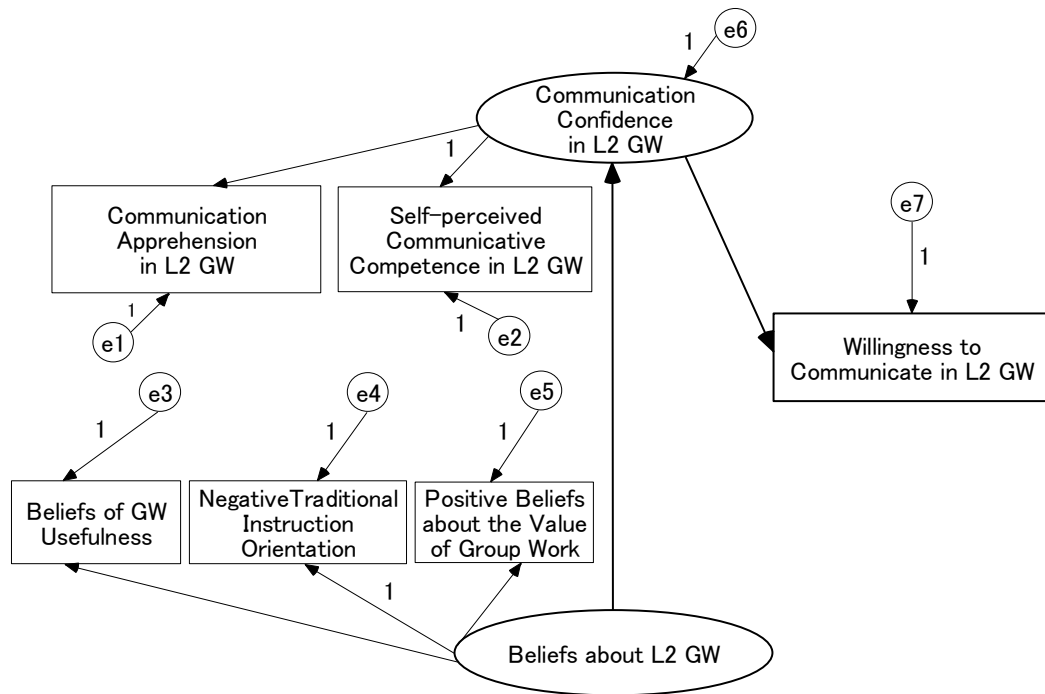


Figure 13. L2 group work structural model (tested model). GW = Group Work.

### *Assumptions of the Structural Model*

The assumptions of multivariate normality and linearity were evaluated through SPSS. Eight univariate outliers ( $z \geq |3.29|$ ) and nine multivariate outliers were identified using a Mahalanobis distance greater than 20.515,  $df = 5$ ,  $p < .001$ . These outliers were excluded from the analysis, leaving 592 cases. There were no missing data because they were replaced with the mean when the assumptions of the factor analysis were checked. After deleting the univariate and multivariate outliers, the skewness and kurtosis of each indicator variable were found to be normal (Table 35), and the histograms did not indicate any non-normality. Linearity was checked by examining scatterplots of all the pairs of variables. No markedly curvilinear relationships were identified.

Table 35. *Skewness and Kurtosis of the Indicator Variables*

	Skewness	SES	Kurtosis	SEK
CA	.16	.10	-.25	.20
SPCC	.12	.10	.15	.20
PBVGW	-.35	.10	-.13	.20
NTIO	-.36	.10	.07	.20
BGWU	.13	.10	-.19	.20
WTC	-.02	.10	.11	.20

*Note.*  $N = 592$ ; CA = *Communication Apprehension in L2 Group Work*; SPCC = *Self-perceived Communicative Competence in L2 Group Work*; PBVGW = *Positive Beliefs about the Value of Group Work*; NTIO = *Negative Traditional Instruction Orientation*; BGWU = *Beliefs of Group Work Usefulness*; WTC = *Willingness to Communicate in L2 Group Work*.

### *Model Estimation*

The hypothesized model shown in Figure 13 was tested using the maximum likelihood method. Because the *N*-size was large (592), and there was a possibility that a further modification of the tested model might be necessary, the data were randomly split. The first data set ( $n = 296$ ) was used for model specification and modification of the model, and the second data set ( $n = 296$ ) was used to confirm the results obtained with the first data set.

AMOS provides over 20 fit indices, which are classified into three categories: Tests of model significance, comparative indices, and parsimony adjusted measures. Kline (2005) suggested that researchers report the model chi-square (CMIN) and the root mean square error of the model approximation (RMSEA) from the first category, the comparative fit index (CFI) from the second category, and the standardized root mean square residual (SRMR). Because AMOS does not provide SRMR, the goodness of fit index (GFI) and the parsimony comparative fit index (PCFI) are reported instead of SRMR. PCFI was chosen because it provides information belonging to the third category.

The results are presented in Table 36 and Figure 14. The  $\chi^2$  statistic (= CMIN,  $df = 8$ ,  $n = 296$ ) was 40.729,  $p = .00$ , which rejected the model. However, with such a large *n*-size, the  $\chi^2$  test tends to reject models easily. The goodness of fit index (GFI, .959) and the comparative fit index (CFI, .937) showed good fit as they were above .90 (Byrne, 2001). However, the root mean square error of approximation index (RMSEA) was .118, which is larger than the suggested criteria of .05 and .08 proposed by Browne and

Cudeck (1993) as an indicator of fair fit. Values greater than .10 suggest that the model should be rejected (Byrne, 2001). Therefore, it was concluded that this model should be modified.

Table 36. Selected Fit Statistics for the Base Model (with Data Set 1)

	<i>CMIN</i>	<i>df</i>	<i>GFI</i>	<i>CFI</i>	<i>PCFI</i>	<i>RMSEA</i>	<i>RMSEA</i> 90% <i>CI</i>	<i>RMSEA</i> 90% <i>CI</i>
							<i>Low</i>	<i>High</i>
<b>Base model</b>	40.749	8	.959	.939	.501	.118	.083	.155

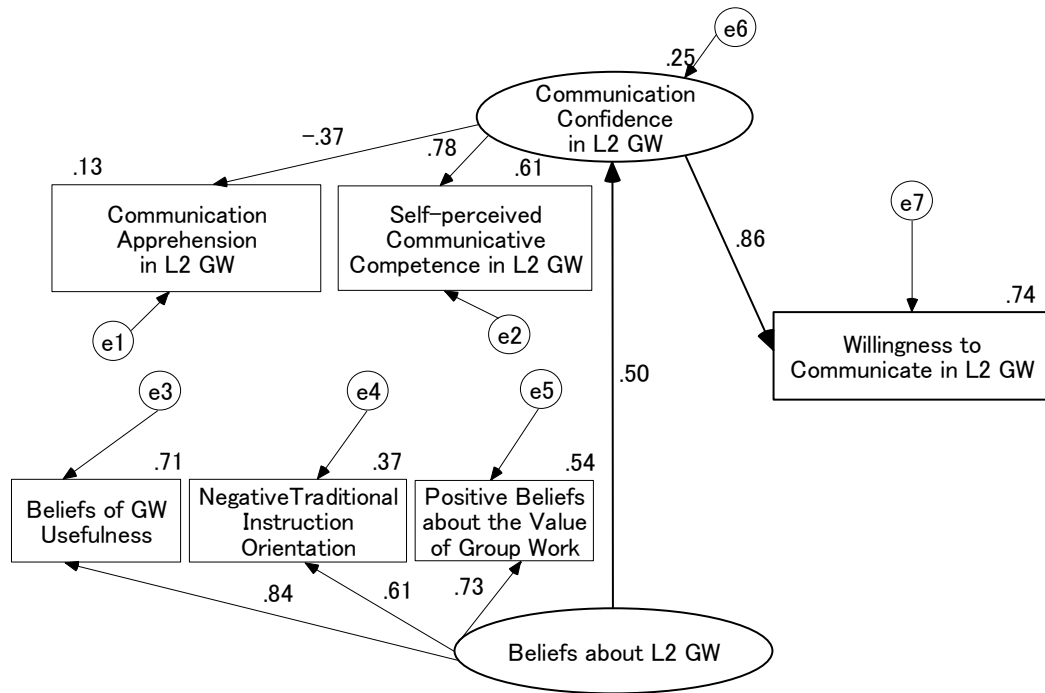


Figure 14. SEM results of the base model with standardized estimates (with data set 1).  
GW = Group Work.

Post hoc model modifications were conducted in order to improve model fit.

Modification indices suggested that *Negative Traditional Instruction Orientation* affected

Table 37. Selected Fit Statistics for Modified Model 1 (with Data Set 1)

	CMIN	df	GFI	CFI	PCFI	RMSEA	RMSEA	RMSEA
							90% CI	90% CI
							Low	High
<b>Modified Model 1</b>	21.121	7	.978	.974	.454	.083	.044	.124

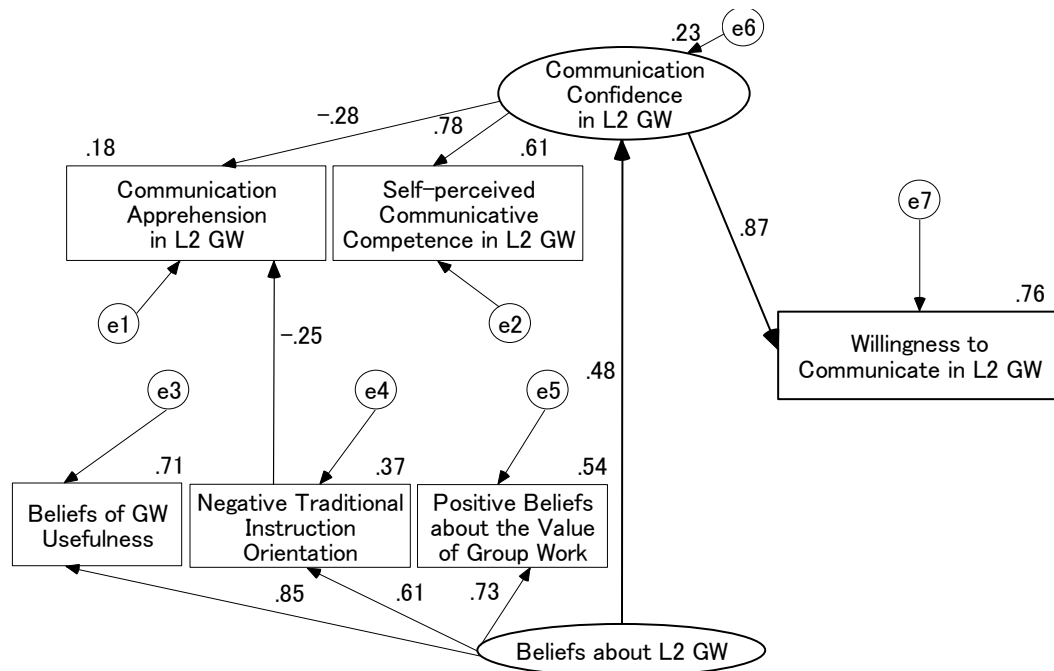


Figure 15. SEM results for modified model 1 with standardized estimates (with data set 1). GW = Group Work.

*Communication Apprehension in L2 Group Work*, and in return, *Communication Apprehension in L2 Group Work* affected *Negative Traditional Instruction Orientation*, and that adding these paths would improve model fit. Therefore, first, a path from *Negative Traditional Instruction Orientation* to *Communication Apprehension in L2 Group Work* was added (the arrow in Figure 15 indicates the added path). This modified model was named Modified Model 1. Next, this model was tested, and the statistical

results,  $\chi^2 = 21.121$  ( $df = 7, p = .000$ ), GFI = .978, CFI = .974, and RMSEA = .083 (Table 37), indicated that model fit improved. However, although the RMSEA had decreased to .83, it was still considered to indicate less than adequate fit. Therefore, a further modification was made.

Next, a path from *Communication Apprehension in L2 Group Work* to *Negative Traditional Instruction Orientation* was added to Modified Model 1 (see the arrow in Figure 15). The new model was named Modified Model 2. This model was tested, and the modification indices further improved and were satisfactory (GFI = .988, CFI = .990, RMSEA = .056), and the  $\chi^2$  was 11.477 ( $df = 6, p = .075$ , Table 38). This model indicates that *Negative Traditional Instruction Orientation* and *Communication Apprehension in L2 Group Work* are both independent and dependent variables to each other. The negative value of the regression weight from *Negative Traditional Instruction Orientation* to *Communication Apprehension in L2 Group Work* (-.56) suggests that stronger *Negative Traditional Instruction Orientation* are accompanied by decreases in communication anxiety. At the same time, the positive value of the regression weight from *Communication Apprehension in L2 Group Work* to *Negative Traditional Instruction Orientation* (.37) implies that higher communication anxiety is related to stronger *Negative Traditional Instruction Orientation*. At first glance, these two relationships look contradictory. However, they are understandable because students who believe less in traditional instruction would find more value in group work, and thus would feel more comfortable working in groups, a feeling that would be likely to reduce their

communication anxiety in L2 group work. At the same time, if students' communication anxiety in L2 group work is high, their fear of speaking up in front of the class when they are called on by the teacher would be high. Therefore, those with higher communication anxiety in group work would find group work superior to teacher-led, traditional classes because they do not have to speak up in front of all of their peers, which might be more face-threatening than participating in group work. Because these data-driven paths were easily interpretable, Modified Model 2 was selected as the final model. Figure 16 shows the final model with standardized estimates. All the regression weights (shown next to the arrows) and squared multiple correlations (shown above the variables) were statistically significant.

Table 38. *Selected Fit Statistics for the Final Model (with Data Sets 1 and 2)*

	<i>CMIN</i>	<i>df</i>	<i>GFI</i>	<i>CFI</i>	<i>PCFI</i>	<i>RMSEA</i>	<i>RMSEA</i> <i>90% CI</i>	<i>RMSEA</i> <i>90% CI</i>
							<i>Low</i>	<i>High</i>
Data Set 1	11.477	6	.988	.990	.396	.056	.000	.104
<b>Data Set 2</b>	22.268*	6	.975	.975	.390	.096	.055	.140

\*Statistically significant at  $p = .001$

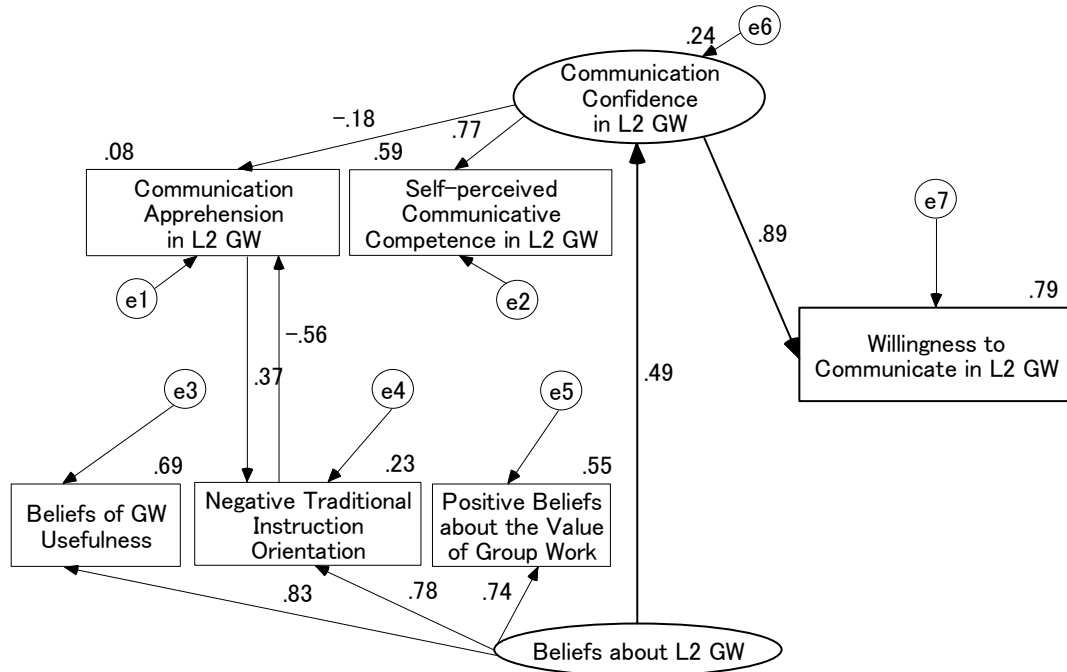


Figure 16. SEM results (final model) with standardized estimates (with data set 1). GW = Group Work.

In order to increase the generalizability of the final model, data set 2 was used to confirm model fit. Table 38 and Figure 17 show the results. Although data set 2 yielded slightly worse fit for the final model than data set 1, the GFI (.975) and CFI (.975) indices indicated good model fit, as did the RMSEA (.096) index, which was less than .10. The regression weights and squared multiple correlations for the path diagram for data set 2 (Figure 17) were similar to those for data set 1 (Figure 16). Taken together, these results indicate that the final model is generalizable even though it was partly a data-driven model.



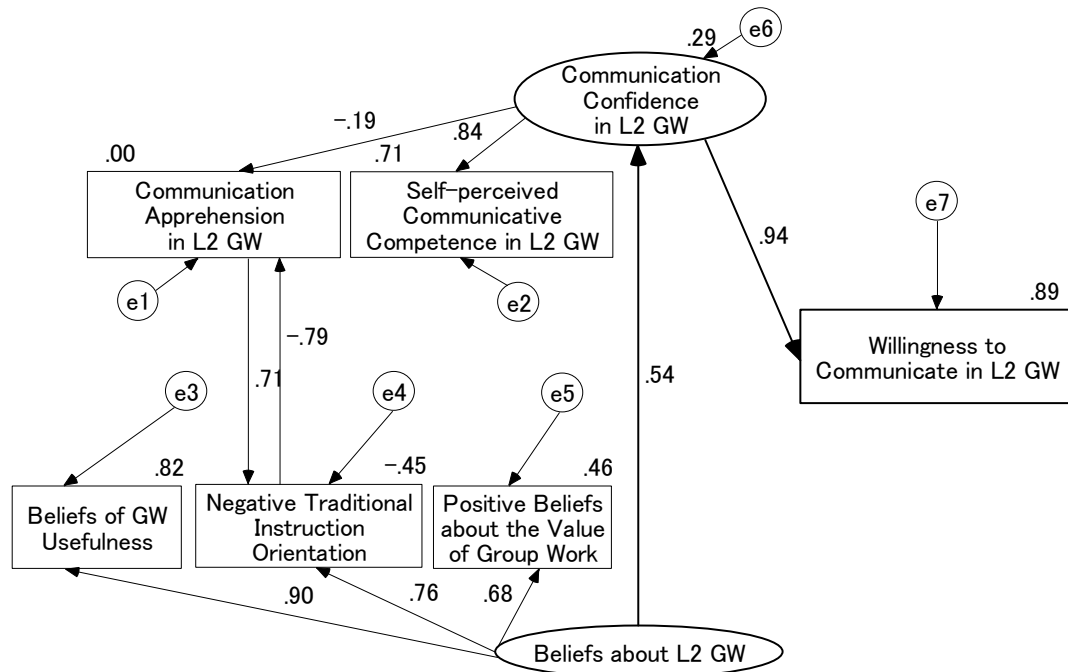


Figure 17. SEM Results (final model) with standardized estimates (with data set 2). GW = Group Work.

#### Direct Effects

The standardized regression weight ( $\beta$ ) of .89 ( $p = .001$ , two-tailed, Figure 16, data set 1) indicates that *Communication Confidence in L2 Group Work* had a strong direct effect on *Willingness to Communicate in L2 Group Work*. *Beliefs about Group Work* significantly predicted *Communication Confidence in L2 Group Work* ( $\beta = .49$ ,  $p = .001$ , two-tailed). In other words, all other things being equal, higher *Communication Confidence in L2 Group Work* predicts higher *Willingness to Communicate in L2 Group Work*, and higher *Beliefs about L2 Group Work* predicts higher *Communication Confidence in L2 Group Work*. *Beliefs of Group Work Usefulness* (.83), *Negative Traditional Instruction Orientation* (.78), and *Positive Beliefs about the Value of Group*

*Work* (.74) were strong indicators of *Beliefs about L2 Group Work*, and *Communication Apprehension in L2 Group Work* (-.18) and *Self-perceived Communicative Competence in L2 Group Work* (.77) were strong indicators of *Communication Confidence in L2 Group Work*. It is also clear that *Self-perceived Communicative Competence in L2 Group Work* was a stronger indicator of *Communication Confidence in L2 Group Work* than *Communication Apprehension in L2 Group Work*. This result agreed with Yashima's (2002) study, where the  $\beta$  from *Communication Confidence in L2 Group Work* to *Communication Apprehension in L2 Group Work* was -.49 and *Self-perceived Communicative Competence in L2 Group Work* was .72 (p. 61).

#### *Indirect Effects*

As shown in Figure 16 (data set 1), the relationship between *Beliefs about L2 Group Work* and *Willingness to Communicate in L2 Group Work* was mediated by *Communication Confidence in L2 Group Work*. That is, *Beliefs about L2 Group Work* had an indirect effect (via *Communication Confidence in L2 Group Work*) on *Willingness to Communicate in L2 Group Work*. Standardized indirect effects and bias-corrected confidence intervals and significance tests were requested. The indirect effect was .43, which indicates that *Beliefs about L2 Group Work* had a moderate indirect effect on *Willingness to Communicate in L2 Group Work*.

## CHAPTER 7

### DISCUSSION

In this chapter, I will summarize the findings for the five research questions, and then discuss the important findings. Because the construct of *Readiness for L2 Group Work* is new, no previous research was available that would allow for a comparison with previous findings. Although *Willingness to Communicate in L2* has been extensively studied, previous researchers did not focus on *Willingness to Communicate in L2 Group Work* in language classrooms. In this sense, the findings of this study will make valuable and important contributions to our understanding of students' *Readiness for L2 Group Work*.

#### Students' Readiness for L2 Group Work

Research question 1 asked about the participants' *Readiness for L2 Group Work* immediately upon entering the university and after studying one semester. Before beginning the discussion, I will briefly summarize the major findings for this research question.

First, the COM students were found to be more ready for L2 group work than the LAC students at the beginning of the semester. Second, within the LAC course, the higher proficiency students showed higher mean scores for *Readiness for L2 Group Work*

than the lower proficiency students, but in the COM course, the opposite tendency was shown. Third, these tendencies did not change at the end of the semester.

Looking at each construct of *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*, first, it was found that the students as a whole had relatively neutral *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work* at the beginning of the course. *Communication Apprehension in L2 Group Work* decreased and *Self-perceived Communicative Competence in L2 Group Work* increased by the end of the semester. Second, the participants showed high *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* at the beginning of the semester. *Negative Traditional Instruction Orientation* was relatively high but not as high as *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness*. At the end of the semester, the participants' *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* slightly declined, but *Negative Traditional Instruction Orientation* showed the opposite tendency. Third, *Willingness to Communicate in L2 Group Work* showed a sharp decline from the beginning to the end of the course.

The group tendencies for each construct of *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*, were first, the lower proficiency COM students had low *Communication Apprehension in L2 Group Work* (the lowest among the four groups) and almost neutral *Self-perceived Communicative Competence in L2 Group Work* at the beginning and the end of the semester. They showed the highest *Positive*

*Beliefs about the Value of Group Work* and *Negative Traditional Instruction Orientation* among the four groups both at the beginning and at the end of the semester. Their *Beliefs of Group Work Usefulness* was the highest at the beginning of the course and the second highest at the end of the semester. Second, the lower proficiency LAC students showed a clear contrast to the lower proficiency COM students. Their *Communication Apprehension in L2 Group Work* was the highest, *Self-perceived Communicative Competence in L2 Group Work*, *Negative Traditional Instruction Orientation*, *Willingness to Communicate in L2 Group Work* were the lowest among the four groups, and *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* were the second lowest at the beginning of the semester. At the end of the semester, their *Communication Apprehension in L2 Group Work* was the highest, and all the other constructs were the lowest among the four groups.

#### *Readiness for L2 Group Work*

Table 39 shows the means and the 95% confidence intervals for *Readiness for L2 Group Work* and its two component factors, *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*. Each of them was calculated using the equation described earlier. The lower proficiency COM students had the highest mean scores for all variables. They were followed by the higher proficiency COM students, and the higher proficiency LAC students. The lower proficiency LAC students had the lowest mean scores for all variables. From these results, the lower proficiency COM students

were the most ready for group work in L2 in all aspects, and the lower proficiency LAC students were the least ready for L2 group work.

No researchers previously investigated the variable, *Readiness for L2 Group Work*, because this construct was first proposed in this study. Therefore, I will focus on the differences among the four groups (two proficiency levels and the two courses).

Table 39. *Comparison of Questionnaires 1 and 2 for Communication Confidence in L2 Group Work, Beliefs about L2 Group Work, and Readiness for L2 Group Work*

Level	Course	Var	<i>n</i>	Questionnaire 1			Questionnaire 2			
				<i>M</i>	95% CI		<i>n</i>	<i>M</i>	95% CI	
					Lower Limit	Upper Limit			Lower Limit	Upper Limit
Higher	LAC	CC	127	3.00	2.89	3.11	124	3.23	3.14	3.33
		BGW	127	3.89	3.80	3.98	124	3.87	3.78	3.97
		RGW	127	6.89	6.73	7.06	124	7.11	6.94	7.27
	COM	CC	84	3.12	2.99	3.26	79	3.35	3.20	3.50
		BGW	84	3.97	3.87	4.08	79	3.87	3.75	3.98
		RGW	84	7.10	6.90	7.30	79	7.22	7.00	7.43
Lower	LAC	CC	249	2.81	2.74	2.88	245	3.00	2.93	3.07
		BGW	249	3.85	3.78	3.91	245	3.76	3.69	3.82
		RGW	249	6.66	6.54	6.77	245	6.75	6.64	6.87
	COM	CC	169	3.19	3.11	3.28	161	3.42	3.33	3.51
		BGW	169	4.07	4.00	4.15	161	3.98	3.90	4.04
		RGW	169	7.27	7.13	7.40	161	7.40	7.25	7.55

*Note.* LAC = Language and Culture course; COM = Communication course; Var = Variable; CC = *Communication Confidence in L2 Group Work*; BGW = *Beliefs about L2 Group Work*; RGW = *Readiness for L2 Group Work*. Possible maximum score of CC and BGW was 5, and that of RGW was 10. Because the numbers have been rounded off, the scores for RGW do not equal the sum of CC and BGW.

### *Course Differences*

Regardless of general English proficiency, the COM students showed higher *Readiness for L2 Group Work* (higher proficiency students:  $M = 7.10$ , lower proficiency

students:  $M = 7.27$ ) than the LAC students (higher proficiency students:  $M = 6.89$ , lower proficiency students:  $M = 6.66$ ) at the beginning of the semester. The reason for this difference might be that the questionnaire items used in this study were focused on language production (speaking, in particular) rather than language comprehension in L2 group work; therefore, it is natural that those who chose the more production-oriented COM course tended to be higher in their *Readiness for L2 Group Work* than those who selected the more reception-oriented LAC course.

Although all four groups increased their *Readiness for L2 Group Work* on Questionnaire 2, the rank order of the mean scores of the four groups (lower proficiency COM: highest, lower proficiency LAC: lowest) did not change at the end of the semester. This indicates that despite the fact that the COM students experienced more L2 group work than the LAC students, the *Readiness for L2 Group Work* of the students in the two courses did not seem to be affected differently by the different degrees of the use of L2 group work and the different instructional foci (i.e., production in the COM course and reception in the LAC course).

### *Proficiency Differences*

The lower proficiency COM students showed higher *Readiness for L2 Group Work* than those with higher proficiency both at the beginning and at the end of the semester. This was caused by the lower proficiency COM students' higher ratings on *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*.

The lower proficiency COM students showed higher *Communication Confidence in L2 Group Work* ( $M = 3.19$ ) and *Beliefs about L2 Group Work* ( $M = 4.07$ ) than the higher proficiency COM students ( $M = 3.12$  and  $3.97$ , respectively) at the beginning of the course. This tendency was the same at the end of the course. It was hypothesized that higher proficiency students would show higher *Readiness for L2 Group Work* in each course because of their greater confidence in their English ability and greater ability to participate effectively in L2 group work. In fact, in the LAC classes, the higher proficiency students showed higher *Readiness for L2 Group Work* than the lower proficiency students both at the beginning and at the end of the semester. However, in the COM classes, the opposite result was found. Although the difference was marginal, the lower proficiency students showed higher *Communication Confidence in L2 Group Work* (Table 39). Looking more closely, the higher proficiency COM students showed slightly higher *Communication Apprehension in L2 Group Work* ( $M = 2.73$ ) than the lower proficiency COM students ( $M = 2.47$ ), while their *Self-perceived Communicative Competence in L2 Group Work* was marginally higher (higher proficiency COM,  $M = 2.98$ ; lower proficiency COM,  $M = 2.85$ ) at the beginning of the semester (Table 12 in Chapter 6) and this tendency did not change at the end of the semester (Table 13 in Chapter 6). This discrepancy was reflected in the unexpected result for *Communication Confidence in L2 Group Work*. However, why the lower proficiency COM students showed lower communication apprehension than the higher proficiency COM students is not readily interpretable. One tentative explanation might be that the lower proficiency



students might have felt that the relatively relaxed atmosphere that group work creates would reduce their communication anxiety. Another interpretation is that lower proficiency students might have low English learning motivation, so they did not care so much about their performance in the class, and this might have led to lower communication apprehension.

### *The Overall Tendency of Each Component*

#### *Communication Apprehension and Self-perceived Communicative Competence*

The participants had relatively neutral *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work* at the beginning of the course. These are rather surprising results given that Keaten et al. (1997) showed that the communication apprehension of Japanese children increased as they grew older. In this study, because the participants were university students, their level of communication apprehension was expected to be high as McCroskey et al. (1985) reported that more than 70% of the Japanese college students who participated in their study showed high levels of communication apprehension in both the L1 and L2. Pribyl et al. (1998) also reported Japanese college students had higher communication apprehension than their U.S. counterparts. Moreover, considering the grammar-translation instruction that the students were likely to have received in junior and high school (Gorsuch, 2000) and previous research indicating Japanese college students' preference for accuracy-oriented, teacher-centered instruction (Matsuura et al.,

2001), it was anticipated that the students would show rather high communication apprehension and low self-perceived communicative competence. However, unlike Gorsuch and Matsuura's studies, this study was focused on the students' perceptions of these constructs in the context of L2 group work. Therefore, these discrepancies may have been due to the time and contextual differences.

This interpretation is supported by the results of Questionnaire 2. The students became even less apprehensive about communicating in English and viewed themselves as more communicatively competent after one semester of English instruction. This result was consistent with my study (Fushino, 2006b) study, in which I reported a low level of *Communication Apprehension in L2 Group Work* (Rasch person logit = -.54) on the questionnaire that was administered to the first year university students at the beginning of the fall semester, when they had already experienced one semester of English instruction at the same university as the one in this study. This low level of *Communication Apprehension in L2 Group Work* may have been brought about in part because the classes were basically conducted in English, they were not focused on grammar or translation, and the students had four 90-minute classes per week, which provided them with more exposure to English communication than at most universities in Japan.

One thing that should be pointed out is that *Self-perceived Communicative Competence in L2 Group Work* remained almost unchanged from Questionnaire 1 (2.76) to Questionnaire 2 (2.85). It seems that even though the students lowered their

*Communication Apprehension in L2 Group Work* after one semester of English instruction at this university (from 2.77 to 2.45), this instruction could not change the students' *Self-perceived Communicative Competence in L2 Group Work*. This suggests that students' *Communication Apprehension in L2 Group Work* is reduced before they increase their *Self-perceived Communicative Competence in L2 Group Work*. In other words, *Communication Apprehension in L2 Group Work* might be more easily changed than *Self-perceived Communicative Competence in L2 Group Work* in educational contexts such as that provided at this university.

These results clearly suggest that if Japanese students are exposed to more English and released from the pressure to use grammatically correct English, they will be more relaxed when communicating in English. In addition, because L2 group work provides students with frequent opportunities to express themselves in English without being constantly monitored by the teacher, they can take risks in using the foreign language in a non-threatening atmosphere. Many cooperative learning (CL) advocates (e.g., Crandall, 1999; DaSilva Iddings, 2006; Olsen & Kagan, 1992; Sharan & Shacher, 1988) have asserted that these are two benefits of small group work. The opportunities to freely express themselves without worrying about making mistakes in group work further encourages students to focus on communication, and this results in decreased communication apprehension in L2 group work.

These findings provide a very important implication. If one objective of English education is to help students become more confident English communicators, L2 group

work should be viewed as an effective instructional means to achieve this goal in that it provides students with increased opportunities for student-student interaction, genuine communication, and opportunities to try out new language in a non-threatening environment.

### *Beliefs about L2 Group Work*

Unlike the results of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*, the results of the three belief constructs (*Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*) present a more difficult picture to interpret. There was no existing research, except my studies (Fushino, 2006a, 2006b), on beliefs about group work, so it is not possible to compare the results of this study and previous studies on small group work.

At the beginning of the semester, the students showed high *Positive Beliefs about the Value of Group Work* ( $M = 4.17$ ) and *Beliefs of Group Work Usefulness* ( $M = 4.00$ ). The students may have valued cooperation because of their life experiences and cultural background in which cooperation is emphasized. The high endorsement for *Beliefs of Group Work Usefulness* might have been brought about either by their previous positive experiences with group work (Colbeck et al., 2000; Gillies, 2003a; Holtfreter, 2002, Holtfreter & Holtfreter, 2001) or by their positive expectations of group work tasks.

Although their scores on *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* slightly declined at the end of the semester (3.92, 3.85, respectively), their endorsement of these two constructs was still high. I reported similar results (Fushino, 2006). In that study, *Beliefs about the Value of Cooperation* received a very high endorsement (Rasch person logit = 1.38). The questionnaire used in my study contained almost the same items in *Positive Beliefs about the Value of Group Work* in this study. *Beliefs about the Relationship with Other Members* (Rasch person logit = 0.79) and *Beliefs about Academic Growth in Group Work* (Rasch person logit = 0.93), from which all the items in *Beliefs of Group Work Usefulness* in this study came, were highly endorsed, too. Holtfreter and Holtfreter (2001) also reported that their participants (college students) thought that small group work provided them with skills that would be necessary for success in the workplace and in life after experiencing cooperative group work.

On the other hand, *Negative Traditional Instruction Orientation* ( $M = 3.63$ ) was endorsed relatively highly but not as highly as *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* at the beginning of the semester. The initial lower rating of *Negative Traditional Instruction Orientation* might be the result of the participants' previous English education. Most of the students received teacher-fronted instruction and seldom took part in group work in their high school English classes (Interview data obtained in the fall semester, 2005). Therefore, they were more used to teacher-centered instruction than group work. Because they were successful in terms of

passing highly competitive college entrance examinations after receiving teacher-fronted instruction, they may have viewed that form of instruction positively. In fact, as Matsuura et al. (2001) suggested, they may have preferred teacher-centered instruction. In their 2002 study, Garrett and Shortall reported similar results. Their participants (EFL students at a language school, mean age of 19) viewed teacher-fronted grammar instruction as being more effective than student-centered (small group) grammar activities. On the other hand, after becoming university students, the participants in this study might have thought that a different form of instruction requiring more student initiative, such as group work, might be superior to teacher-fronted instruction. This interpretation is congruent with the finding by Holtfreter and Holtfreter (2001), in which they reported that college students believed that a cooperative approach involving small group activities was better than the lecture/discussion approach after experiencing cooperative small group work. Although the cause of this result was not investigated in this study, these suppositions might partly explain why *Negative Traditional Instruction Orientation* was rated somewhat lower than *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness*.

After one semester of instruction, the students' *Negative Traditional Instruction Orientation* ( $M = 3.79$ ) increased slightly compared with the beginning of the semester ( $M = 3.63$ ). Holtfreter and Holtfreter (2001), too, reported that students believed that the cooperative approach using small group work was preferable to the lecture/discussion approach after experiencing both approaches. The slight increase in *Negative Traditional*

*Instruction Orientation* stands in contrast to *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness*, both of which showed a slight decline from the beginning of the semester. Although *Negative Traditional Instruction Orientation* was endorsed the lowest among the three belief constructs (similar results was reported in my 2006b study), this opposite tendency is noteworthy. One possible explanation for this increase is that after the students experienced group work, although there was a difference in the degree of the use of group work in the two courses, they may have realized that they had more frequent opportunities to communicate with each other in small groups than in teacher-fronted classes, and therefore, may have come to evaluate group work more highly.

#### *Willingness to Communicate in L2 Group Work*

*Willingness to Communicate in L2 Group Work* was relatively high at the beginning of the course ( $M = 3.76$ , 95% confidence interval: 3.70-3.83). This may have reflected the students' initial high motivation as new university students and expectations to have more opportunities to communicate with their classmates in an environment that differed from their high schools. The decline in their *Willingness to Communicate in L2 Group Work* at the end of the semester might have been caused by the wording of the items on Questionnaire 1 (*shitai*, or want to) and Questionnaire 2 (*suru tsumorida*, or be willing to). Because of the different wording, it is unclear whether the students' *Willingness to Communicate in L2 Group Work* really declined or if the decline was spurious.

### *The Group Tendency of Each Component*

#### *Lower proficiency COM Students*

Looking at each group's tendencies at the beginning of the semester, it is noteworthy that the lower proficiency COM students had low *Communication Apprehension in L2 Group Work* and almost neutral *Communication Confidence in L2 Group Work* despite their lower English proficiency. Research shows that communication confidence, whose components are communication apprehension and self-perceived communicative confidence in the L2, does not necessarily reflect real L2 proficiency (Yashima, 2002). The lower proficiency COM students' *Self-perceived Communicative Competence in L2 Group Work* was only slightly lower than or the same as that of the higher proficiency students (both COM and LAC). MacIntyre et al. (1997) reported that students with low anxiety tend to overestimate their English proficiency. In a similar way, the lower proficiency students, in this study, who had a lower level of communication apprehension, may have overestimated their communicative competence in L2 group work.

On the other hand, the lower proficiency COM students showed lower *Communication Apprehension in L2 Group Work* than the higher proficiency COM students despite the fact that their *Self-perceived Communicative Competence in L2 Group Work* was lower than that of higher proficiency students. As stated earlier, they may have perceived group work as less anxiety provoking or they might have been



unmotivated to study English; thus, they did not care about their performance, which in turn led to lower anxiety.

The lower proficiency COM students endorsed other constructs (*Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*) highly; thus, the lower proficiency COM students, who were communication-oriented, appeared the most ready for L2 group work among the four groups.

#### *Lower proficiency LAC Students*

Unlike the lower proficiency COM students, the lower proficiency LAC students showed the highest *Communication Apprehension in L2 Group Work* and lowest *Self-perceived Communicative Competence in L2 Group Work* among the four groups. They had the lowest means among the four groups for all constructs except *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness*, which all groups endorsed very highly at the beginning of the semester. In particular, their degree of *Self-perceived Communicative Competence in L2 Group Work* was low ( $M = 2.57$ ); their perception of their L2 communication competence matched their actual low English proficiency. However, it is also possible that they might have underestimated their actual English ability because, as MacIntyre et al. (1997) suggested, anxious students tend to underestimate their actual competence. The data do not allow us to determine which was the true case. In any case, this low *Self-perceived Communicative Competence in L2*

*Group Work* may partly explain why these students chose the LAC course, in which receptive skills were emphasized. At the end of the semester, the lower proficiency COM students' overall tendency remained unchanged.

## Group Differences in Readiness for L2 Group Work

### *Summary of the Major Findings*

Research Question 2 asked “To what degree does the students’ *Readiness for L2 Group Work* differ due to the type of course and proficiency grouping at the onset and the end of one semester?” Before discussing the findings for Research Question 2, I will briefly summarize the major findings. First, the  $2 \times 2$  ANOVA results for Questionnaires 1 and 2 showed that there was a statistically significant main effect for Course for *Readiness for L2 Group Work*, but not for Level. That is, the COM students were significantly more ready for L2 group work than the LAC students. However, there was also a statistically significant Level and Course interaction for *Readiness for L2 Group Work*. Second, looking at group differences for each component, the  $2 \times 2$  ANOVA results for Questionnaires 1 and 2 showed that there were statistically significant differences between the COM and LAC students on *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Negative Traditional Instruction Orientation* and *Willingness to Communicate in L2 Group Work*. Third, statistically significant differences between the higher and lower proficiency students appeared in *Self-perceived Communicative Competence in L2 Group Work* on

Questionnaires 1 and 2. Fourth, it was found that *Willingness to Communicate in L2 Group Work* was not statistically significant for Level on Questionnaire 1 but was statistically significant on Questionnaire 2. Fifth, there was an interaction effect for *Communication Apprehension in L2 Group Work* between Course and Level on both Questionnaires 1 and 2. Sixth, *Self-perceived Communicative Competence in L2 Group Work* and *Positive Beliefs about the Value of Group Work* had statistically significant interaction effects only on Questionnaire 2. No previous studies produced results that were directly related to this research question, so it is impossible to compare the results of this study with other studies.

### *Readiness for L2 Group Work*

#### *Course Differences*

The  $2 \times 2$  ANOVA results showed that the COM and LAC students differed significantly on *Readiness for L2 Group Work* both at the beginning and the end of the semester. The descriptive statistics revealed that the COM students were more ready for L2 group work than the LAC students. This result was not surprising because the items on the questionnaire were mainly related to oral production. At the university where this study was conducted, the students were informed that the COM course would focus on communication, which required more production, while in the LAC course, receptive skills and cultural knowledge would be emphasized. Therefore, those who were more communication oriented were likely to choose the COM course. Oral communication

involves working with other students. Because of this, the COM students were probably more ready than the LAC students for L2 group work at the beginning of the semester. On the other hand, the students who chose the LAC course might have preferred more traditional English instruction involving teacher-fronted lessons and a focus on accuracy and grammar as described in Matsuura et al. (2001). These differences in instructional preference are likely to be a cause of this significant difference in *Readiness for L2 Group Work*. In the COM course, the students had more opportunities to interact with each other in small group work than the LAC students. This experience of group work is considered one of the causes for the COM students' significantly higher *Readiness for L2 Group Work* than the LAC students at the end of the semester.

#### *Level × Course Interaction*

There was a significant Level × Course interaction for *Readiness for L2 Group Work* both at the beginning and the end of the course. This was caused by the opposite trends shown by the COM and LAC students. While the lower proficiency COM students showed the highest level of *Readiness for L2 Group Work*, the lower proficiency LAC students displayed the lowest level of *Readiness for L2 Group Work*. The lower proficiency LAC students' low *Readiness for L2 Group Work* was readily interpretable: it is closely related to their preference for acquiring receptive skills rather than productive skills. Along with this preference, their lower proficiency might have made them avoid interacting in small group work. However, the reason why the lower proficiency COM

students showed higher *Readiness for L2 Group Work* than their higher proficiency counterparts is not clear. One possible interpretation is that despite their communication difficulties due to their lower English proficiency, their higher *Readiness for L2 Group Work* made them to want to choose the COM course, and because the instruction in the COM course matched their preference, their *Readiness for L2 Group Work* remained the highest among the four groups.

### *Each Component*

#### *Course Differences*

The  $2 \times 2$  ANOVA results for Questionnaires 1 and 2 showed statistically significant differences ( $\alpha < .011$ ) between the COM and LAC students on *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Negative Traditional Instruction Orientation*, and *Willingness to Communicate in L2 Group Work*. It is not surprising that these differences existed in *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, and *Willingness to Communicate in L2 Group Work* because the students knew that the productive use of English would be emphasized in the COM course when they selected it, and it is highly likely that those who were more communicatively oriented chose the COM course. Regarding *Negative Traditional Instruction Orientation*, there was a possibility that because those who chose the COM course liked to communicate in English, they thought that group work would

provide frequent opportunities to do so and was thus superior to a teacher-fronted, lecture-style type of instruction. Another possibility is that the students who selected the COM course had more positive experiences of group work in previous classes. These positive experiences may have made them think that L2 group work was preferable to teacher-fronted instruction. However, this is speculation and research on students' previous experience with group work is called for.

### *Level Differences*

*Level differences for Self-perceived Communicative Competence in L2 Group Work.* Differences between the higher and lower proficiency students' *Self-perceived Communicative Competence in L2 Group Work* appeared on Questionnaires 1 and 2. The higher proficiency students perceived themselves as more communicatively competent in L2 group work than the lower proficiency students to a statistically significant degree. These group differences did not change on Questionnaire 2. *Self-perceived Communicative Competence in L2 Group Work* was the only construct in *Readiness for L2 Group Work* that showed a statistically significant level difference. In Yashima's study (2002), the students' L2 proficiency was not directly related to their L2 communication confidence. However, in this study, the participants' L2 proficiency measured by the school's placement test and their *Self-perceived Communicative Competence in L2 Group Work* matched. *Self-perceived Communicative Competence in L2 Group Work* was only one of the constructs that constituted *Communication Confidence in L2 Group Work*, and

the research foci were different in the two studies in that Yashima (2002) focused on L2 communication in general while L2 group work in classroom settings was the focus of this study. Therefore, while no strong claims can be made based on the results, the findings of this study do not support Yashima's finding.

*Level differences for Willingness to Communicate in L2 Group Work.* *Willingness to Communicate in L2 Group Work* was the only construct that was not statistically significant for Level on Questionnaire 1, but it was statistically significant on Questionnaire 2. As Table 40 shows, *Willingness to Communicate in L2 Group Work* decreased in all groups from Questionnaire 1 to Questionnaire 2. However, this decline was greater for the lower proficiency students. In particular, on Questionnaire 2, the mean for *Willingness to Communicate in L2 Group Work* for the lower proficiency LAC students ( $M = 2.84$ ) was much lower than the means of the other three groups (higher proficiency LAC:  $M = 3.31$ ; higher proficiency COM:  $M = 3.49$ ; lower proficiency COM:  $M = 3.25$ ). This contributed greatly to this statistically significant difference in Level. The lower proficiency LAC students were initially relatively willing to communicate ( $M = 3.60$ ). However, the instruction that they received, in which group work was infrequently employed, did not seem to develop their *Willingness to Communicate in L2 Group Work*. Another interpretation is also possible. As noted earlier, the wording used in Questionnaire 1 (*shitai*, want to) and Questionnaire 2 (*suru tsumorida*, be willing to) differed. The students might have differed more in the degree to

which they were willing to do the things presented in Questionnaire 2 than in their “wants.”

Table 40. *Means and 95% Confidence Intervals for Willingness to Communicate in L2 Group Work on Questionnaires 1 and 2*

Questionnaire	Level	Course	<i>n</i>	<i>M</i>	<i>SE</i>	95% CI	
						Upper limit	Lower limit
1	Higher	LAC	125	3.80	.07	3.93	3.64
		COM	84	4.03	.08	4.18	3.87
	Lower	LAC	247	3.60	.06	3.69	3.47
		COM	169	3.89	.06	4.00	3.78
2	Higher	LAC	122	3.31	.08	3.45	3.15
		COM	78	3.49	.09	3.66	3.32
	Lower	LAC	241	2.84	.05	2.75	2.97
		COM	160	3.25	.06	3.35	3.11

*Note.* LAC = Language and Culture course; COM = Communication course.

This finding provides further support for the use of group work in English classes. Lower proficiency students who prefer receptive learning need frequent opportunities to work with peers in well-structured groups in order to elevate their *Willingness to Communicate in L2 Group Work* by engaging in active communication as Olsen and Kagan (1992) suggested. While the higher proficiency LAC students can benefit from teacher-fronted instruction as much as from group work because their high English proficiency allows them to communicate with the teacher, the lower proficiency LAC students, who may have difficulty communicating with the teacher on a one-on-one basis because of their low English proficiency, may need a more non-face-threatening, intimate atmosphere that small group work can create (Dörnyei, 1997; Jacobs et al, 2002,



McCafferty et al., 2006) if they are to become more willing to communicate.

Well-structured group work can also create a situation in which students can easily interact, thus increasing their opportunities to speak to each other (e.g., Jacobs et al., 2002; Kagan, 1994). This situation naturally pushes students to communicate more. The lower proficiency LAC students may not have been able to work well in groups at the beginning of the semester; however, the persistent use of well-structured group work can elevate their *Willingness to Communicate in L2 Group Work*.

#### *Positive Beliefs about the Value of Group Work and Beliefs of Group Work Usefulness*

None of the groups differed to a statistically significant degree on *Positive Beliefs about the Value of Group Work* and *Beliefs of Group Work Usefulness* on both Questionnaires 1 and 2. The descriptive statistics (see Tables 15 and 23) showed that these two variables were highly endorsed by the students in all groups although their endorsement slightly declined on Questionnaire 2. Japanese generally value harmony and cooperation (cf., Kristof, 1997), and because almost all participants were Japanese, this high endorsement for *Positive Beliefs about the Value of Group Work* is understandable. Many of the items (see Appendix D) measuring *Beliefs of Group Work Usefulness* might have been easy for most of the students to endorse. For these reasons, there were no statistically significant differences among the four groups on these two constructs.

### *Interaction Effects*

*Communication apprehension in L2 group work.* The interactions between Course and Level in *Communication Apprehension in L2 Group Work* on both Questionnaires 1 and 2 were caused by the opposite tendencies shown by the COM and LAC students. Although the difference was not statistically significant, the higher proficiency LAC students showed lower *Communication Apprehension in L2 Group Work* than those with lower proficiency, while the lower proficiency COM students showed much lower (statistically significant) *Communication Apprehension in L2 Group Work* than those with higher proficiency.

The results for the LAC students are readily understandable because higher language proficiency should enable them to understand what others say relatively easily, and thereby reduce their communication anxiety. However, it is not clear why the lower proficiency COM students displayed less communication apprehension than the higher proficiency COM students. One possible interpretation is that although the lower proficiency COM students preferred to communicate with others, their low proficiency made it difficult for them to communicate in a whole class setting and thus made them feel anxious. On the other hand, they could feel more relaxed in small groups because they only needed to communicate with group members whom they felt comfortable with. This view is in line with the study by Garrett and Shortall (2002) in which they reported that elementary level students felt more relaxed in student-centered fluency practice than their higher proficiency counterparts. Unlike that study, even the lower proficiency

students in this study had already received 6 years of English education. Therefore, they were not elementary level students. However, Garrette and Shortall's (2002) results indicated that small group work focused on fluency building can create a more relaxing atmosphere in which lower proficiency students feel comfortable.

Moreover, because the lower proficiency COM students in this study perceived their communicative competence in English as not being high, gains from working with group members may have surpassed their fear of making mistakes. In contrast, the higher proficiency COM students, because they had higher *Self-perceived Communicative Competence in L2 Group Work*, were perhaps more conscious of their own English, and the possibility of making mistakes in front of the other group members might have made them feel anxious.

#### *Self-perceived Communicative Competence in L2 Group Work and Positive Beliefs about the Value of Group Work*

*Self-perceived Communicative Competence in L2 Group Work* and *Positive Beliefs about the Value of Group Work* had statistically significant interaction effects only on Questionnaire 2. The interaction for *Self-perceived Communicative Competence in L2 Group Work* was caused by the low degree of *Self-perceived Communicative Competence in L2 Group Work* shown by the lower proficiency LAC students when compared with their higher proficiency counterparts. There was almost no difference in *Self-perceived Communicative Competence in L2 Group Work* among the COM students. After one

semester of English instruction, the COM students, regardless of their proficiency level, and the higher proficiency LAC students showed increased levels of *Self-perceived Communicative Competence in L2 Group Work*, but the lower proficiency LAC students started the lowest and their position remained unchanged at the end of the semester; thus, the instruction that the lower proficiency LAC students received did not increase their *Self-perceived Communicative Competence in L2 Group Work*. When this result is considered together with their low level of *Willingness to Communicate in L2 Group Work*, there is a possibility that the instruction that the lower proficiency LAC students received may have had some problems. In the Listening and Reading course, which the LAC students took twice a week, they engaged in individual reading tasks and watched videos in every lesson. The materials were the same for both the lower and higher proficiency students; therefore, the lower proficiency LAC students might have found the materials too difficult and became disinterested in the English courses. In addition, because of the students' inactiveness in classrooms, the teachers might have found teacher-fronted instruction more effective, which further limited the students' opportunities to participate in L2 group work. This situation may have prevented them from developing a stronger sense of communicative competence in L2 group work. An alternative explanation is that their initially low *Self-perceived Communicative Competence in L2 Group Work* and *Willingness to Communicate in L2 Group Work* could not be changed with only one semester of English instruction because these predispositions are resistant to change.

The LAC and COM students showed different tendencies on Questionnaire 2 for *Positive Beliefs about the Value of Group Work*. The lower proficiency COM students showed high *Positive Beliefs about the Value of Group Work* ( $M = 4.12$ ), followed by the higher proficiency LAC students ( $M = 3.99$ ). The higher proficiency COM students and the lower proficiency LAC students had the lowest *Positive Beliefs about the Value of Group Work* ( $M = 3.82$ ). This opposite tendency caused the interaction effect. Why was the *Positive Beliefs about the Value of Group Work* of the higher proficiency COM students much lower than that of the lower proficiency COM students? The data in this study cannot provide a clear explanation. However, it is possible that because the higher proficiency COM students could communicate with others relatively well due to their high proficiency and communicative orientation, they may have felt more independent and therefore less inclined to cooperate with other students. On the other hand, the lower proficiency COM students may have valued cooperation because their lower English proficiency required them to work together with their peers in order to accomplish the task goals.

### *Summary*

In summary, it is clear that the four groups were not the same in terms of their *Readiness for L2 Group Work*. Those students who chose the COM Course were more ready for L2 group work than those who chose the LAC Course at the beginning and at the end of the course. This might have been due to their lower *Communication*

*Apprehension in L2 Group Work*, higher *Self-perceived Communicative Competence in L2 Group Work*, and stronger *Negative Traditional Instruction Orientation*. Clear differences between the higher and lower proficiency level students did not emerge, although there were some interaction effects between the course choice and the participants' proficiency levels. Because of the group differences in some components of *Readiness for L2 Group Work*, instruction matching the students' readiness would be necessary to maximize the effect of instruction and help students become more ready for group work. For example, if the students' *Self-perceived Communicative Competence in L2 Group Work* is low, care must be taken to boost this perception by assigning easy, rather than challenging communication tasks that they can successfully accomplish, especially at the beginning of the course. In addition, in order to lower students' *Communication Apprehension in L2 Group Work*, small group work focusing on fluency may prove especially useful for lower proficiency students (Garrette & Shortall, 2002) because the focus on fluency results in a reduced emphasis on accuracy and this allows the students to worry less about making mistakes and to thereby feel less anxious when communicating with peers.

### Time Differences

Research Question 3 asked about the changes in the students' *Readiness for L2 Group Work* due to the type of course and proficiency grouping between the beginning and the end of one semester.

The students were more ready for L2 group work at the end than at the beginning of the course to a statistically significant degree. This finding suggests that the English education provided at the university effectively increased the students' *Readiness for L2 Group Work* regardless of the course choice. However, a close inspection of the two components of *Readiness for L2 Group Work* (*Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*) indicates that the increase in *Readiness for L2 Group Work* occurred primarily because of an increase in *Communication Confidence in L2 Group Work* (see Table 39). This indicates that the use of a great deal of spoken English in the classrooms, which occurred in part because of the university's English-only policy, effectively increased the students' *Communication Confidence in L2 Group Work*. Alternatively, *Communication Confidence in L2 Group Work* may be easily changed in less anxiety provoking, relaxed classes.

In contrast, group work, whether or not it was often used, did not change the students' *Beliefs about L2 Group Work* in a positive way. This could have occurred for several reasons. First, even when the students worked in groups, they did not necessarily work in small groups that incorporated important elements of cooperative learning, such as positive interdependence, individual accountability, and promotive interaction (e.g., Gillies, 2007; Johnson & Johnson, 1999a; Johnson, Johnson, & Holubec, 2002). This is an important issue given that Slavin's (1995) meta-analysis showed that group goals and individual accountability were the major factors that made cooperative learning more effective than traditional group work. Springer et al. (1999) also reported that

experiencing cooperative small group work brought about a positive attitudinal change in college students. Most advocates of cooperative learning have stated that just having students work together does not necessarily increase learning (e.g., Gillies, 2007; Johnson & Johnson, 1999a; Johnson, Johnson, & Holubec, 2002; Kagan, 1994). Therefore, if the students in this study simply sat together in groups without receiving instruction aimed at developing their interpersonal communication skills, providing elaborated explanations, fulfilling their responsibility as group members, they were less likely to experience highly productive group work; hence it is natural that they did not realize the effectiveness of group work. This idea is speculative because no data are available indicating how the teachers structured group work in this study; however, if this is the case, it is reasonable that the students' *Beliefs about L2 Group Work* did not become more positive. Or even worse, the group work that the students experienced might have disappointed them (as in Gillies, 2003a, for example).

A second interpretation is that one semester of instruction was too short to positively change the participants' *Beliefs about L2 Group Work*. Considering that the students had developed their beliefs about the value of group work through 12 years of formal education (from elementary to senior high school) and their out-of-school experiences, the English classes that the students took during the course of this study made up only a small part of their lives. Therefore, even if students experienced productive group work in one particular course, they might have attributed its productiveness to a situation specific factor, such as having good members, and might



not have readily generalized its effectiveness to other group work situations. Previous researchers, such as Sakui and Gaies (1999) and Woods (2006), suggested that beliefs are changeable but relatively stable; therefore, more time might have been needed to change their already formed beliefs. In addition, the responses to the question concerning the use of group work in English classes showed that the LAC students did not have many opportunities to participate in group work. This situation may have made it more difficult for them to change their *Beliefs about L2 Group Work*. This implies that in order for students to strengthen their *Beliefs about L2 Group Work*, experiencing well-structured cooperative learning group work for an extended period is probably necessary (Gillies, 2003a).

A third interpretation is that the students' *Beliefs about L2 Group Work* decreased as a result of decreased learning motivation. After the novelty of studying at the university disappeared, the students' interest in learning English may have decreased as Dörnyei suggested (2001b), and this decreased level of interest might have adversely influenced their *Beliefs about L2 Group Work*. If this interpretation is correct, teachers need to pay more attention to maintaining students' interest in learning English.

#### Relationships among the Readiness Factors and Willingness to Communicate

Research Question 4 asked about the relationships among *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*. All the tested relationships were statistically significant

and can be classified into five categories: (a) the relationship between *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*, (b) the relationships among *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*, (c) the relationships between *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*, (d) the relationships among the three components of *Beliefs about L2 Group Work*, and (e) the relationship among *Beliefs about L2 Group Work*, *Communication Apprehension in L2 Group Work*, and *Self-perceived Communicative Competence in L2 Group Work*.

First, in regards to the relationship between *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*, the more ready the students were for L2 group work, the more willing they were to communicate in L2 group work ( $r = .59$ ). This supported the hypothesis that *Readiness for L2 Group Work* would be strongly related to *Willingness to Communicate in L2 Group Work*. Expectancy-value theory (Wigfield, 1994; Wigfield & Eccles, 2000) includes the proposal that people are motivated to engage in tasks that they are confident that they can accomplish and that they value. Following this theory, I expected that if students were confident in L2 communication and if they had strong, positive beliefs about L2 group work, they would willingly communicate in L2 group work. This hypothesis was supported by the data. This interpretation is also plausible in terms of MacIntyre et al.'s (1998) heuristic model in which willingness to communicate is directly affected by communication confidence,

which is one of the components of *Readiness for L2 Group Work* in the model tested in this study.

Second, all of the correlations among *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work* variables were statistically significant. *Communication Confidence in L2 Group Work* had a much stronger association with *Willingness to Communicate in L2 Group Work* ( $r = .71$ ) than *Beliefs about L2 Group Work* ( $r = .38$ ) did, and *Communication Confidence in L2 Group Work* had a moderate association with *Beliefs about L2 Group Work* ( $r = .43$ ). Although correlational relationships do not indicate causality, these results might indicate that *Communication Confidence in L2 Group Work* is the direct antecedent of *Willingness to Communicate in L2 Group Work*, a possibility that will be discussed more in the section about Research Question 5. The moderate association between *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work* also support my hypothesis that *Readiness for L2 Group Work* consists of *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*.

Third, among the components of *Communication Confidence in L2 Group Work*, first, *Communication Apprehension in L2 Group Work* had a weak, negative correlation ( $r = -.28$ ) with *Self-perceived Communicative Competence in L2 Group Work*. This negative association supported my hypothesis that as the students' *Communication Apprehension in L2 Group Work* increased, their *Self-perceived Communicative Competence in L2 Group Work* would decrease, and Yashima's (2002) similar finding

that showed Communication Anxiety in L2 was negatively correlated with Perceived Communication Competence in L2 ( $r = -.32$ , p. 65), but I had expected that the relationship would be stronger. This weak association indicates that even if students have relatively strong *Communication Apprehension in L2 Group Work*, not many of them perceive their communicative competence as being rather high, or vice versa, i.e., those who were anxious when communicating did not always view their communicative competence as low. Conversely, those who perceived themselves as communicatively competent were not necessarily free from communication apprehension. Next, *Self-perceived Communicative Competence in L2 Group Work* was more strongly associated with *Willingness to Communicate in L2 Group Work* ( $r = .71$ ) than *Communication Apprehension in L2 Group Work* ( $r = -.22$ ). This finding is in line with Yashima (2002), who reported a similar result.

Fourth, the three components making up *Beliefs about L2 Group Work* were positively correlated with one another, which was congruent with my hypothesis. However, although only *Beliefs of Group Work Usefulness* was moderately correlated with *Positive Beliefs about the Value of Group Work* ( $r = .60$ ) and with *Negative Traditional Instruction Orientation* ( $r = .44$ ), the other combination yielded only a weak association ( $r = .38$ ).

The weak association between *Positive Beliefs about the Value of Group Work* and *Negative Traditional Instruction Orientation* ( $r = .38$ ) and the moderate association between *Positive Beliefs about Value of Cooperation* and *Beliefs of Group Work*

*Usefulness* ( $r = .60$ ) indicates that *Positive Beliefs about the Value of Group Work* has a stronger relationship with *Beliefs of Group Work Usefulness* than *Negative Traditional Instruction Orientation*. This is reasonable because the *Negative Traditional Instruction Orientation* items asked students to compare L2 group work with other instructional methods while the *Beliefs of Group Work Usefulness* items did not require such comparisons. Therefore, even if they thought that cooperation itself was valuable, it is not surprising that they did not perceive L2 group work to be particularly superior to other instructional methods. In other words, even if students positively value cooperation, they do not automatically believe that L2 group work is superior to other instructional methods. However, as Springer et al. (1999) reported that experiencing small group work positively changed students' attitudes toward learning, if students have sufficient opportunities to participate in small group work, they may become more positive about foreign language learning and attribute this positive attitudinal change to the L2 group work.

A fifth noteworthy finding is that *Communication Apprehension in L2 Group Work* had a stronger, negative correlation with *Beliefs about L2 Group Work* ( $r = -.41$ ) than *Self-perceived Communicative Competence in L2 Group Work* ( $r = .29$ ) did, although both correlations were statistically significant. This indicates that if students are less communicatively apprehensive in L2 group work, they tend to have stronger *Beliefs about L2 Group Work*, or vice versa. However, even if students perceive themselves as more communicatively competent, they do not necessarily have more positive *Beliefs*

*about L2 Group Work*, possibly because students who perceive themselves to be more communicatively competent believe that they can participate in L2 group work regardless of the strength of their *Beliefs about L2 Group Work*. On the other hand, because group work involves communication with others, students with higher communication apprehension tend to have weaker *Beliefs about L2 Group Work*, and those with weaker *Beliefs about L2 Group Work* may view group work as an anxiety provoking situation.

#### The Effects of Readiness for L2 Group Work on Willingness to Communicate

Research Question 5 concerned the effects of each component of students'

*Readiness for L2 Group Work* on their *Willingness to Communicate in L2 Group Work*.

The participants were randomly split in half, and the first half (data set 1) was used for model specification, and the second half (data set 2) was used to confirm the structural model. The fit indices (Table 38 in Chapter 6) for the final model with data set 1 indicated that the model fit the data well. Seventy-nine percent of the *Willingness to Communicate in L2 Group Work* variable was accounted for by *Communication Confidence in L2 Group Work*, 24% of which was accounted for by *Beliefs about L2 Group Work*. These results showed that *Communication Confidence in L2 Group Work* was the strong predictor of *Willingness to Communicate in L2 Group Work*.

*Communication Confidence in L2 Group Work* had a strong direct effect ( $\beta = .89$ ) on *Willingness to Communicate in L2 Group Work*. *Beliefs about L2 Group Work* had a

moderate indirect effect ( $\beta = .43$ ) on *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*.

This finding confirmed MacIntyre et al.'s (1998) heuristic model in which L2 Communication Confidence is an immediate antecedent of Willingness to Communicate in L2. In Yashima's (2002) model, too, Communication Confidence in L2 is a direct antecedent of Willingness to Communicate in L2. In her model, Intercultural Posture is shown as another direct antecedent of Willingness to Communicate in L2. However, in this model, the situation was L2 group work in classrooms. Therefore, instead of Intercultural Posture, *Beliefs about L2 Group Work* was included as a latent variable. *Beliefs about L2 Group Work* is a new concept, specific to the group work situation, and in this study beliefs were conceptualized to be relatively stable from class to class. Therefore, it cannot be a direct antecedent of *Willingness to Communicate in L2 Group Work*. The path from *Beliefs about L2 Group Work* to *Communication Confidence in L2 Group Work* to *Willingness to Communicate in L2 Group Work* exemplifies my hypothesis that *Beliefs about L2 Group Work* indirectly influences *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*.

In the model in this study, *Communication Confidence in L2 Group Work* had two indicator variables, *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*. The standardized regression weight from *Communication Confidence in L2 Group Work* to *Self-perceived Communicative Competence in L2 Group Work* was .77 while that to *Communication Apprehension in L2*

*Group Work* was  $-.18$ . This indicates that *Self-perceived Communicative Competence in L2 Group Work* was more strongly predicted by *Communication Confidence in L2 Group Work* than *Communication Apprehension in L2 Group Work* was. This is consistent with the results of the Pearson correlation coefficient conducted for Research Question 4. *Beliefs about L2 Group Work* had almost equal predictive power for *Positive Beliefs about the Value of Group Work* (.74), *Negative Traditional Instruction Orientation* (.78), and *Beliefs of Group Work Usefulness* (.83). These results were consistent with the results of the Pearson correlation coefficient conducted for Research Question 4.

The final structural model (see Figures 16 and Table 38) showed a good fit with data set 1, and data set 2 yielded similar results; thus, the results support my hypothesis. Splitting the data and using the second data set to confirm the results obtained with the first data set increased the plausibility of the model. However, in data set 2, RMSEA increased to .096. Although it was still lower than .10, which is the point at which the model should be rejected, further study is necessary to strengthen the model.

Another issue to be noted is that, in the final model, two paths were added between *Communication Apprehension in L2 Group Work* and *Negative Traditional Instruction Orientation*. These paths were data-driven and not included in the tested model (Figure 13). These two paths indicate that both variables affect one another. These were unexpected relations; however, as stated above, they can be explained as follows: If students view L2 group work as superior, they find more value in L2 group work, and thus feel more comfortable working in groups. This feeling of comfort is likely to reduce



their *Communication Apprehension in L2 Group Work*. At the same time, if students' *Communication Apprehension in L2 Group Work* is high, their fear of speaking up in front of the class when they are called on by the teacher would be high. Therefore, students with higher *Communication Apprehension in L2 Group Work* would find group work superior to teacher-led classes because they do not have to speak up in front of all of their peers, which might be more face-threatening than participating in small group work. Small group activities may also allow them to peripherally participate in group work; therefore, students with higher *Communication Apprehension in L2 Group Work* might have ample time to observe what other members do and increase their familiarity with L2 group work, and this sense of familiarity with group work may lower their anxiety.

This final model suggests that if teachers want their students to participate in group work in English classes more actively, they should attempt to increase the students' *Communication Confidence in L2 Group Work*. Because *Communication Confidence in L2 Group Work* is influenced by *Beliefs about L2 Group Work*, they should also consider how to positively influence students' *Beliefs about L2 Group Work*.

A final implication of the model is that teachers should pay attention to elevating students' *Self-perceived Communicative Competence in L2 Group Work* because this variable was more strongly associated with *Communication Confidence in L2 Group Work* than *Communication Apprehension in L2 Group Work* was although *Self-perceived Communicative Competence in L2 Group Work* was found to be more difficult to change

than *Communication Apprehension in L2 Group Work*. This result was congruent with the findings of Research Question 4. Teachers should create success-oriented tasks and provide students with numerous opportunities to successfully complete the given tasks. Teachers should also check tasks for task difficulty, complexity, and familiarity, and provide models that clarify the task goals (Jacobs, August 2007). Scaffolding, such as giving hints and doing the first part of a task together, should be provided by the teacher and peers in order to allow weaker students to experience success. Last but not least, creating an intimate, cooperative, warm atmosphere where students willingly take risks and try out their L2 is important because this supportive atmosphere is likely to increase chances for success in communication, and cumulative success will lead to increased confidence.

## CHAPTER 8

### CONCLUSION AND IMPLICATIONS

In this chapter, I will briefly summarize the study, discuss the limitations of the study, discuss implications for L2 group work research, and provide pedagogical implications.

#### Summary of This Study

This study shed light on the participants' *Readiness for L2 Group Work*, a topic which, to my knowledge, has never been studied. This construct was investigated by measuring possible component factors that were extracted by a factor analysis:

*Communication Apprehension in L2 Group Work, Self-perceived Communicative Competence in L2 Group Work, Positive Beliefs about Value of Cooperation, Negative Traditional Instruction Orientation, and Beliefs of Group Work Usefulness*. I also directly investigated the students' level of *Willingness to Communicate in L2 Group Work* and its relationship with *Readiness for L2 Group Work*.

First, descriptive statistics were presented describing the students' readiness components (*Communication Apprehension in L2 Group Work, Self-perceived Communicative Competence in L2 Group Work, Positive Beliefs about Value of Cooperation, Negative Traditional Instruction Orientation, and Beliefs of Group Work Usefulness*) and *Willingness to Communicate in L2 Group Work* at the beginning and the

end of the semester. The tendencies of the students as a whole, as well as the tendencies of the participants at each of two proficiency levels (higher and lower) and two courses (Language and Culture Course, LAC; and Communication Course, COM) were described. Second, the differences in *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Positive Beliefs about Value of Cooperation*, *Negative Traditional Instruction Orientation*, *Beliefs of Group Work Usefulness*, and *Willingness to Communicate in L2 Group Work* among each of the two-proficiency-level students and those who belonged to two different English courses (LAC and COM) were investigated. Third, the degree to which students' *Readiness for L2 Group Work* changed from the beginning to the end of the course was investigated. Fourth, the relationships among *Communication Confidence in L2 Group Work* (consisting of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*), *Beliefs about L2 Group Work* (consisting of *Positive Beliefs about Value of Cooperation*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*), *Readiness for L2 Group Work* (consisting of *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*), and *Willingness to Communicate in L2 Group Work* were investigated. Finally, a structural equation model showing how these variables affect each other was tested.

## Limitations

There are seven limitations to this study. First, the questionnaire was designed to measure *Communication Apprehension in L2 Group Work*, *Self-perceived Competence in L2 Group Work*, *Positive Beliefs about the Value of Group Work*, *Negative Traditional Instruction Orientation*, and *Beliefs of Group Work Usefulness*, as constructs of *Readiness for L2 Group Work*. The results of the factor analysis showed that these are constructs that constitute *Readiness for L2 Group Work*. However, the effect size ( $\eta^2$ ) of each construct in the ANOVAs was small; therefore, it is probable that other important aspects of *Readiness for L2 Group Work* were not measured.

Second, the wording in the *Willingness to Communicate to L2 Group Work* section was changed from *shitai* (want to) in Questionnaire 1 to *suru tsumorida* (be willing to) in Questionnaire 2. Therefore, comparisons of this section of these two questionnaires was compromised to some degree.

Third, the Rasch model was not used to check item endorsability, item and person fit, or the dimensionality of the constructs. The Rasch model provides person ability measures that are on an interval scale, so Rasch logits allow for more precise estimates of any individual's position vis-a-vis the latent variable. However, because raw scores were used instead of Rasch logits in this study, the results are based on non-linear measurement.

Fourth, the structural model tested in this study was a simple one. Because one purpose was to investigate the relationship among *Communicative Confidence in L2*

*Group Work, Beliefs about L2 Group Work, and Willingness to Communicate in L2 Group Work*, L2 learning motivation or personality variables, which are likely to have effects on *Willingness to Communicate in L2 Group Work*, were intentionally excluded. The data fit the modified model well; however, in order to obtain a fuller picture of factors that affect *Willingness to Communicate in L2 Group Work*, more constructs should be identified and included in future studies. In addition, data driven paths were added to the tested model to improve the model fit. Although these paths were interpretable, the model should be further developed and tested with new participants. On the other hand, because of its simplicity, this model is more generalizable to other Japanese university EFL contexts.

Fifth, the proficiency level of the students was determined using the results of a placement test conducted at the university. Because I had no access to the raw test data, it was necessary to rely on the classroom placements determined by the school administrators. Therefore, it was impossible to determine accurately the difference in English proficiency between the two proficiency groups. Because of this, the results concerning the two proficiency groups should be interpreted cautiously.

Sixth, one semester might be too short to see more tangible changes in students' *Readiness for L2 Group Work*. As Sakui and Gaies (1999) and Woods (2006) stated, beliefs are rather stable and need time to change; therefore, the results obtained in this semester long study might not capture students' slow change in *Beliefs about L2 Group Work* well.

Finally, like all questionnaire studies, this study shows the general tendencies of the investigated groups, rather than individual's profiles. Also, it is not possible to clearly explain why group differences occurred and why the students' *Readiness for L2 Group Work* differed between the beginning and the end of the semester. Furthermore, in this study, how students in heterogeneous groups which are formed based on the questionnaire results actually function in groups was not investigated. Qualitative inquiry is necessary to provide clearer explanations.

#### Theoretical Implications

A new concept of *Readiness for L2 Group Work* was presented for the first time in this study. *Readiness for L2 Group Work* was made up of *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work*. Using this concept as a stepping stone, future researchers can further refine the concept of *Readiness for L2 Group Work*. This study also showed the relationships between the components of *Readiness for L2 Group Work* and *Willingness to Communicate in L2 Group Work*. I expect that the structural model tested in this study will open up discussions on relationships among components of *Readiness for L2 Group Work* and *Willingness to Communicate in L2*.

#### *Implications for Research on Readiness and Willingness in L2 Group Work*

The concept of *Readiness for L2 Group Work* was based on the idea that students vary in their *Readiness for L2 Group Work*, and as they participate in group work, their

readiness increases. In the cooperative learning literature, heterogeneous grouping is said to be an important element for successful group work. However, researchers mainly focus on academic ability differences, and they have never considered *Readiness for L2 Group Work*. This concept may be another important aspect of students' heterogeneity.

A largely original questionnaire with one part being a drastically modified version of McCroskey's PRCA-24 questionnaire on communication anxiety (McCroskey & Richmond, 1982) was used in this study. A Factor analysis identified six factors: *Communication Apprehension in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work*, *Positive Beliefs about the Value of Group Work*, *Beliefs of Group Work Usefulness*, *Negative Traditional Instruction Orientation*, and *Willingness to Communicate in L2 Group Work*. *Communication Confidence in L2 Group Work* was conceptualized as being made up of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work* based on Yashima's (2002) and MacIntyre et al. (1998). *Beliefs about L2 Group Work* was considered to be a higher order concept that consists of *Positive Beliefs about the Value of Group Work*, *Beliefs of Group Work Usefulness*, *Negative Traditional Instruction Orientation*. Although these conceptualizations await further validation, presenting these concepts provides a new way to look at students' variability. This also showed students' perceptions about L2 group work, which have not received enough attention in either the fields of CL or SLA.



### *Implications for Model Building*

One focus of this study was on the relationships among *Communication Confidence in L2 Group Work*, *Beliefs about L2 Group Work*, and *Willingness to Communicate in L2 Group Work*. Therefore, the simple structural model was tested. This model was the first to be tested regarding the relationship among constructs of *Readiness for L2 Group Work and Willingness to Communicate in L2 Group Work*. In addition, the data were split into two sets, and the second data set was used to confirm the findings produced by the first set. It was the first time that this procedure has been carried out in the field of second language acquisition to the best of my knowledge. This procedure increases the plausibility of the hypothesized model. It was found that *Communication Confidence in L2 Group Work* directly influenced *Willingness to Communicate in L2 Group Work*, and *Readiness for L2 Group Work* indirectly affected *Willingness to Communicate in L2 Group Work* via *Communication Confidence in L2 Group Work*. The SEM results showed that the modified model fit the data satisfactorily. Presenting a simple, but good-fitting structural model provides a basis for the developments of more complex models, and because of its simplicity, the model is more generalizable to the broader EFL context.

### Pedagogical Implications

In this section, first, I will discuss implications for teachers, and then present implications for foreign language learners.

## *Pedagogical Implications for Teachers*

### *Use of Readiness for L2 Group Work Questionnaire for Heterogeneous Grouping*

In cooperative learning, heterogeneous grouping is considered to be an important factor in bringing about positive outcomes academically, psychologically, and socially (e.g., Cohen, 1994; Gillies, 2007; Kagan, 1994). However, when looking at real classrooms, teachers face a difficulty in forming heterogeneous groups of students. In particular, in college English classes where classes are formed homogeneously based on students' performance, for instance, on a placement test, and where teachers do not have access to student information other than their names and sex, teachers are often ill-equipped, especially at the beginning of a course, to form heterogeneous groups. This readiness measurement can be an alternative tool for making heterogeneous groups where students who are more ready for L2 group work can work with peers who are less ready for L2 group work. The creation of heterogeneous groups can potentially maximize learning because students with more ready for L2 group work are likely to be good models for students less ready for group work on effective interaction in English and lead to more interaction and more opportunities to produce comprehensible output. This increased L2 interaction, which is likely to increase interactionally modified input, negotiation of meaning, and comprehensible output, are considered to promote L2 acquisition (cf. Long, 1983; Swain, 1985).

At the same time, the results showing different degrees of *Readiness for L2 Group Work* among the students indicate that it is unreasonable to assume that every student can

work well in small groups from the beginning. The training of working constructively together that CL proponents advocates (Gillies, 2007; McWhaw, Schnackenberg, Sclater, & Abrami, 2003) may even become more effective by having students with different degrees of *Readiness for L2 Group Work* work together.

#### *Call for Differentiated Instruction Based on Students' Readiness for L2 Group Work*

The four groups of participants differed in their *Readiness for L2 Group Work*. These different group tendencies call for differentiated instruction regarding how to work in small groups. For example, in classes that include many low *Readiness for L2 Group Work* students, confidence, trust, and basic interpersonal skills should be developed by emphasizing positive interdependence and assigning the tasks that enables students to learn these important skills before having them engage in more complex group work.

#### *Boosting Students' Willingness to Communicate in L2 Group Work*

*Readiness for L2 Group Work* was found to be moderately correlated with *Willingness to Communicate in L2 Group Work*. In other words, if *Readiness for L2 Group Work* increased, *Willingness to Communicate in L2 Group Work* also increased to some degree. This finding provides a concrete way to boost *Willingness to Communicate in L2 Group Work*. Without it, active student-student interaction is less likely to occur; therefore, *Willingness to Communicate in L2 Group Work* is crucial in language classrooms. Without interaction, which is likely to include interactional modifications,

(Long, 1983) comprehensible input (Krashen, 1985) and comprehensible output (Swain, 1985), language development cannot be expected. From a sociocultural perspective, too, interaction is crucial in that it creates opportunities for learners to provide scaffolding for each other (Vygotsky, 1978). Finding a way to elevate *Willingness to Communicate in L2 Group Work* directly is difficult. However, because we know that *Willingness to Communicate in L2 Group Work* and *Readiness for L2 Group Work* are correlated, by looking at the five constructs of *Readiness for L2 Group Work* and thinking about how to elevate them first, we can be more specific about how to raise students' *Willingness to Communicate in L2 Group Work*. In other words, we can use components of *Readiness for L2 Group Work* as concrete tools to find ways to boost students' willingness to communicate with peers in L2 small groups.

#### *Development of Communication Confidence*

In this study *Willingness to Communicate in L2 Group Work* was directly influenced by *Communication Confidence in L2 Group Work* and indirectly influenced by *Beliefs about L2 Group Work*. *Communication Confidence in L2 Group Work* and *Beliefs about L2 Group Work* are the two components of *Readiness for L2 Group Work*. Enhancing students' confidence to communicate in English by assigning doable tasks is important. In particular, providing models, demonstrating how to conduct the task properly, creating an atmosphere of positive interdependence, assigning tasks that match students' English proficiency level, keeping group sizes small, and preparing tasks that require various

kinds of intelligences are also likely to boost *Communication Confidence in L2 Group Work* (Jacobs, August 2007). Also, because *Communication Confidence in L2 Group Work* is influenced by *Beliefs about L2 Group Work*, strengthening students' beliefs in the value of group work is necessary. Although no studies have investigated strengthening students' *Beliefs about L2 Group Work*, having students experience learning-rich cooperative learning group work might be potentially beneficial because this experience is likely to lead them to believe in the value of cooperation and the usefulness and efficiency of group work.

#### *Increase of Self-perceived Communicative Competence in L2 Group Work*

In *Communication Confidence in L2 Group Work*, *Self-perceived Communicative Competence in L2 Group Work* had a stronger association with *Communication Confidence in L2 Group Work* than *Communication Apprehension in L2 Group Work* did. This implies that although teachers should not forget to reduce *Communication Apprehension in L2 Group Work*, putting more emphasis on boosting *Self-perceived Communicative Competence in L2 Group Work* is probably a more effective way to elevate students' *Communication Confidence in L2 Group Work* than trying to lower *Communication Apprehension in L2 Group Work*. Here again, assigning doable tasks with clear instructions, demonstrations, and easy-to-follow steps, and facilitating a supportive atmosphere where students listen to each other attentively and praise each

other's effort and accomplishments are essential. Teachers' non-critical attitudes are also important.

### *Implications for Students*

First, this study explored students' degrees of *Readiness for L2 Group Work*.

Although this study was not conducted intending to show the results to the participants, if the Readiness for L2 Group Work Questionnaire is modified and used in classrooms in the future, the results should be shared with the participants. Students should be encouraged to reflect on their views and those of their peers and what strategies they and their classmates have in their repertoires. It is important for students to know how ready they are for L2 group work because they are ultimately responsible for their own learning. If they know their levels of readiness, they will be in a better position to consider how to raise their *Readiness for L2 Group Work*. This can be part of explaining to students why the teacher wants to make group activities part of the way that learning takes place, and why the teacher wishes to facilitate student-student interaction in particular ways. And if they learn who is more ready for L2 group work, they may want to learn from the behaviors or attitudes of the peers at the more advanced stage in order to participate more effectively in groups. Focused attention on the behaviors of more ready students may bring their behaviors in L2 group work within the zone of proximal development of less ready students (cf. Murphey & Murakami, 1998). This, in turn, will likely increase

student-student interaction, and if this interaction happens in English, students will be in a better position to develop their English communication skills.

Second, this study showed that students in the COM course who experienced more group work became more ready for L2 group work after one semester of instruction. If students know this result, even those who think are not good at group work may develop greater confidence that they can participate more effectively in group work. My experience as a teacher suggests that many students realize that they will need to cooperate with others once they graduate from the university and start working. Expectancy-value theories (e.g., Wigfield, 2000; Wigfield & Eccles, 1994) claim that if people believe success in a given task and think it worth doing, they will likely be more motivated. Therefore, by realizing that they can become a productive member of group work and group work is worth doing, students may be more motivated in joining in group work. This increased participation will lead to more opportunities to find value in working cooperatively in groups, both in school and later in the workplace.

#### Suggestions for Future Research

There are several points that should be considered in future research. Regarding the questionnaire, in this study, *Readiness for L2 Group Work* was defined as a combination of *Communication Confidence in L2 Group Work*, which consists of *Communication Apprehension in L2 Group Work* and *Self-perceived Communicative Competence in L2 Group Work*, and *Beliefs about L2 Group Work*, whose constituents are *Positive Beliefs*

*about the Value of Group Work, Beliefs about Group Work Superiority, and Beliefs about Group Work Usefulness.* Future researchers may identify other important constructs. In that case, new sections to measure those constructs should be added and tested.

Examining items on the questionnaire using the Rasch model will also help refine the questionnaire. If items that are easier or more difficult to agree with are found to be needed, these items should be written, added, and further tested with students. Then, with the revised questionnaire, students' *Readiness for L2 Group Work* can be measured more precisely.

Related to the above suggestions, making a more teacher-friendly questionnaire would be of practical value. The current questionnaire was constructed for research purposes; therefore, there are too many items for classroom teachers to administer in class. In addition, the data analysis is time consuming and requires sophisticated statistical software. Constructing a questionnaire consisting of fewer items in a well laid-out format could enable classroom teachers to analyze the data without advanced statistical knowledge and quickly obtain results. The development of such a questionnaire should be the object of a future study.

Group work was broadly defined in this study, and CL group work was not differentiated from non-CL group work. Therefore, it is unknown whether CL group work increases students' *Readiness for L2 Group Work* more than non-CL group work. In order to investigate this issue, an experimental design that compares CL classes and non-CL classes would be necessary. It is also unclear from this study how differently



students' beliefs change after working in CL groups and non-CL groups. Further study is called for.

In this study, a simple structural model testing hypothesized relationships among *Willingness to Communicate in L2 Group Work*, *Communication Confidence in L2 Group Work*, and *Readiness for L2 Group Work* was tested. However, in order to explain what variables affect *Willingness to Communicate in L2 Group Work* more thoroughly, a more comprehensive model made up of more variables should be tested. Also, in the future, this model should be tested with a different population in order to determine the degree to which it can be generalized.

This study employed a quantitative research method and focused on students as a whole. However, use of qualitative research methods is strongly suggested in future studies to investigate the following four issues more thoroughly.

First, when constructing the questionnaire, I assumed that heterogeneously formed groups based on students' *Readiness for L2 Group Work* would function more effectively and efficiently. I believe that students who are less ready for L2 group work will be positively influenced by those who are more ready for L2 group work in terms of how to interact with other members and how to participate in group work. However, it is necessary to closely observe how groups function in order to validate these assumptions.

Second, this study provided a general picture of students' changes in their *Readiness for L2 Group Work*; however, it is unclear how individual students' attitudes toward L2 group work and behaviors change while working in heterogeneously formed

group work based on their *Readiness for L2 Group Work* over time. Furthermore, looking at CL through the lenses proposed by Lave and Wenger (1991) and Brown et al. (1989) may allow us to understand the concept of participation differently. In order to do so, researchers should focus on how students achieve fuller participation from peripheral participation. How their attitudes and behaviors change over time should be investigated using longitudinal observations and semi-structured or unstructured interviews of individual students. Studies conducted using these methods will provide a more precise picture of students' attitudinal shifts and behavioral changes in small group learning. In addition, classroom observations of full class activities and teacher-student interactions will illuminate how teachers and students feel about each other and the class atmosphere, which is believed to greatly affect students' motivation and their willingness to participate in class activities and take risks.

Third, in Chapter 7, I provided various interpretations of the results of this study. However, the quantitative nature of this study does not allow me to clearly answer why these results were brought about. Therefore, follow-up studies that utilize qualitative research methods are called for.

Finally, apart from research method, in order to claim that heterogeneously formed group work based on *Readiness for L2 Group Work* can be beneficial for students' academic growth, students' achievement must be measured. However, discrete-point paper-and-pencil tests measuring the acquisition of linguistic knowledge cannot effectively measure the type of academic growth developed in L2 group work because

what students learn in these groups is more holistic. The use of portfolios or observational techniques might more accurately reflect students' holistic academic growth.

### Conclusion

Recently as a reaction to *yutori kyoiku* (more relaxed curriculum for compulsory education), individualized education and forming classes according to students' mastery levels have been strongly advocated in Japan in order to revitalize Japanese education. However, this view does not take social aspects of learning into account. Only achieving high marks on tests is emphasized, and authorities who promote ability grouping often forget the fact that students need to learn to interact with their peers and teachers, and that they cannot be separated from their living environment if we want them to become members of the society. Classrooms are a crucial part of a learning context, and without a healthy environment, we cannot expect the healthy growth of socially, psychologically, and academically well-balanced individuals. Cooperative learning has been found to be very effective in promoting this healthy, learning-rich (not just academic learning, but more holistic learning) environment. It can be an antidote for various kinds of educational problems. And forming productive groups is the first step toward incorporating CL in classrooms.

In college education, where English education should be free from examination pressure, small group work is not used in many classes, in particular, where receptive

skills are the focus of instruction. The primary reason for this may be that many teachers do not know how to organize group work effectively. Another reason is that many teachers are comfortable with a traditional teacher-fronted teaching style. In order to use small group work (CL group work or not) extensively, teachers have to change their views about learning and teaching and should be ready to give up some of their control. On the other hand, there are many enthusiastic teachers who are willing to try out whatever might work best for students, including group work. However, the more innovative they are, the more they face the problem of forming productive groups. I hope that the questionnaire I have constructed can help those teachers form groups effectively and create groups in which students who are less ready for group work can learn more effective ways to participate in group work from those who are more ready while striving together to reach their common learning goals.

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**APPENDIX A**  
**QUESTIONNAIRE 1 (JAPANESE VERSION)**

グループワークについてのアンケート（記入日：2005年\_\_月\_\_日）

このアンケートは皆さんのグループワークについての考え方を知るためのものです。このアンケートの結果は、授業を向上させるのに役立つよう、研究目的に使用させていただきます。それ以外の目的では一切使用いたしません。どうぞご理解の上、ご協力をよろしく願います。望ましい回答というものはありませんので、正直にお考えをお聞かせ下さい。また、このアンケートの提出をもって、結果の研究使用に同意していただいたものとみなさせていただきます。成績には一切関係いたしませんので安心して正直にお答えください。回答の際には、英語の授業で、英語でグループワーク(2~6人ぐらいのメンバー)をすることを想定してお答えください。質問は飛ばさずすべてにお答えください。ご不明の点などありましたら遠慮なくお尋ねください。

伏野久美子(email: fushinojp@yahoo.co.jp)

**★まず、あなたについて教えてください★**

学部\_\_\_\_\_ このクラスの名前 \_\_\_\_\_ 性別: 男・女 年齢: \_\_才 国籍: \_\_\_\_\_

質問は 8 つのパートに分かれています。パートごとに文章が書かれています。それがどれくらい自分の考えや気持ちと一致するかを 1~5 に○をつけてお答えください。

5: すごくそう思う	4: 少しそう思う	3: どちらとも言えない
2: あまりそうは思わない	1: 全然そうは思わない	

**PART A**

- |  |           |
|--|-----------|
| 1. 私は英語のクラスでグループメンバーと英語で話したくない。                        | 5 4 3 2 1 |
| 2. 英語のクラスでグループワークを行っているとき、リラックスしている。                   | 5 4 3 2 1 |
| 3. 英語のクラスでグループワークを行っているとき、落ち着かない。                      | 5 4 3 2 1 |
| 4. 英語のクラスでグループワークに積極的に参加するのが好きだ。                       | 5 4 3 2 1 |
| 5. 英語のクラスで、あまりよく知らない人と一緒にグループワークをするとき不安を感じる。           | 5 4 3 2 1 |
| 6. 英語のクラスで、グループワークをするとき、緊張してときどきする。                    | 5 4 3 2 1 |
| 7. 英語のクラスでグループワークするのは苦痛だ。                              | 5 4 3 2 1 |
| 8. 英語のクラスでグループワークをするとき、発言するより他の人の意見を聞いているほうがリラックスしている。 | 5 4 3 2 1 |
| 9. 英語のクラスでのグループワークはできるだけしたくない。                         | 5 4 3 2 1 |
| 10. 英語のクラスでもしグループメンバーが自分と違う意見を言ったら、緊張する。               | 5 4 3 2 1 |
| 11. 英語のクラスでグループワークの際、他のメンバーから質問されるとときどきする。             | 5 4 3 2 1 |
| 12. 英語のクラスでグループワークの際、恥ずかしくて他のメンバーに質問できない。              | 5 4 3 2 1 |

**PART B**

- |  |           |
|--|-----------|
| 1. もし私のグループのメンバーが英語で私に質問したら、英語で答えることができる。      | 5 4 3 2 1 |
| 2. もし他のメンバーからの手助けが必要な場合には、英語で頼むことができる。         | 5 4 3 2 1 |
| 3. もしグループメンバーの言ったことがはっきりしなかった場合、英語で質問することができる。 | 5 4 3 2 1 |
| 4. もし課題が単純なものであれば、私は英語でグループワークができる。            | 5 4 3 2 1 |

APPENDIX A (continued)

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 5. グループメンバーに同情をしたり、自分の気持ちを伝えたりすることが英語でできる。       | 5 | 4 | 3 | 2 | 1 |
| 6. 複雑な課題をグループで行うときは、私は日本語を使う必要がある。               | 5 | 4 | 3 | 2 | 1 |
| 7. もし私の考えや意見が他のメンバーと異なったら、それを英語で言うことができる。        | 5 | 4 | 3 | 2 | 1 |
| 8. ジェスチャーなどを一緒に使えば、なんとか英語で自分の考えや意見を伝えることができる。    | 5 | 4 | 3 | 2 | 1 |
| 9. 英語で複雑な考えを表現することができる。                          | 5 | 4 | 3 | 2 | 1 |
| 10. 英語でグループディスカッションリーダーができる。                     | 5 | 4 | 3 | 2 | 1 |
| 11. グループプロジェクトを行うとき、グループメンバーと一緒に、英語を使って計画を立てられる。 | 5 | 4 | 3 | 2 | 1 |
| 12. もしグループワーク中に何か問題が起こったら、英語でその解決策を探ることができる。     | 5 | 4 | 3 | 2 | 1 |

**PART C**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. グループワークをしているときに他のメンバーを助けるは大切なことだ。                | 5 | 4 | 3 | 2 | 1 |
| 2. グループワークは人間の成長にとって大切だ。                            | 5 | 4 | 3 | 2 | 1 |
| 3. グループワークは社会生活をする上で大切だ。                            | 5 | 4 | 3 | 2 | 1 |
| 4. 協力すれば一人で言うよりも良い結果を得ることができる。                      | 5 | 4 | 3 | 2 | 1 |
| 5. 個人で行ってもいい結果を得られる場合でも、協力する価値はある。                  | 5 | 4 | 3 | 2 | 1 |
| 6. 競争よりも協力をした方が、よい結果を得ることができる。                      | 5 | 4 | 3 | 2 | 1 |
| 7. グループワークの成功とは、グループ全体としてだけではなくメンバー全員が目標を達成することである。 | 5 | 4 | 3 | 2 | 1 |
| 8. もしグループワークに参加をしないメンバーがいたら、私はその人に参加をするように促す。       | 5 | 4 | 3 | 2 | 1 |
| 9. グループワークの成功のためには、それぞれのメンバーが自分の分担をきちんと行う必要がある。     | 5 | 4 | 3 | 2 | 1 |
| 10. グループワークの過程で得られる経験は私にとって貴重である。                   | 5 | 4 | 3 | 2 | 1 |
| 11. グループワークは学生の自立を促進するのに役立つ。                        | 5 | 4 | 3 | 2 | 1 |
| 12. グループワークで得られたコミュニケーションのスキルは私の将来にとって役に立つ。         | 5 | 4 | 3 | 2 | 1 |
| 13. グループワークは私自身をよりよく知るためのよい機会である。                   | 5 | 4 | 3 | 2 | 1 |

**PART D**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. 教師主体による指導がないグループワークだけで、私はしっかり学習できる。                      | 5 | 4 | 3 | 2 | 1 |
| 2. 教師主体による指導と組み合わせたグループワークで、私はしっかり学習できる。                    | 5 | 4 | 3 | 2 | 1 |
| 3. グループワークのない教師主体による指導だけの授業で、私はしっかり学習できる。                   | 5 | 4 | 3 | 2 | 1 |
| 4. 教師主体による指導のないグループワークで、私は効率よく学習できる。                        | 5 | 4 | 3 | 2 | 1 |
| 5. 教師主体による指導と組み合わせられたグループワークで、私は効率よく学習できる。                  | 5 | 4 | 3 | 2 | 1 |
| 6. グループワークのない教師主体による指導だけの授業で、私は効率よく学習できる。                   | 5 | 4 | 3 | 2 | 1 |
| 7. 授業中、私は自分一人だけより、仲間と協力した方が、より効率的に学習できる。                    | 5 | 4 | 3 | 2 | 1 |
| 8. 知識は、教師主体型授業と同様に、グループワークでも生み出すことができる。                     | 5 | 4 | 3 | 2 | 1 |
| 9. 英語の授業中、各自が別々に考えるよりも、グループワークをした方が、良い解決策をより効率的に生み出すことができる。 | 5 | 4 | 3 | 2 | 1 |

APPENDIX A (continued)

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 10. <u>一般的に言って</u> 、このクラスの学生はグループワークがうまくできるだろう。 | 5 | 4 | 3 | 2 | 1 |
| 11. 私はグループワークの時間を効率よく使える。                       | 5 | 4 | 3 | 2 | 1 |
| 12. <u>一般的に言って</u> 、グループワークは時間がかかりすぎる。          | 5 | 4 | 3 | 2 | 1 |

**PART E**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. 他のメンバーが話し合っているのを聞いているうちに、私は自分の間違いに気づく。              | 5 | 4 | 3 | 2 | 1 |
| 2. 自分の意見を他の人と共有することによって、自分のグループに貢献することができる。            | 5 | 4 | 3 | 2 | 1 |
| 3. グループメンバーの話を一生懸命に聞くことによって、他のメンバーが何か新しいことに気づく手助けができる。 | 5 | 4 | 3 | 2 | 1 |
| 4. グループメンバーと話し合っている間に、自分一人ではわからなかった問題の答えを見つけることができる。   | 5 | 4 | 3 | 2 | 1 |
| 5. 私は、自分が発言をしているとしないに関わらず、他のメンバーの発言を注意深く聞く。            | 5 | 4 | 3 | 2 | 1 |
| 6. グループワークの際、私はグループメンバーからいろいろな意見や考えを学ぶと思う。             | 5 | 4 | 3 | 2 | 1 |
| 7. もしグループメンバーが私の間違いを指摘してくれたら、私はそれを喜んで聞く。               | 5 | 4 | 3 | 2 | 1 |
| 8. 一緒にグループ活動をするとき、一人ではしばしば見逃していたような点に気づくことができる。        | 5 | 4 | 3 | 2 | 1 |
| 9. グループワークで達した結論は、私一人で考えたものよりも優れている。                   | 5 | 4 | 3 | 2 | 1 |
| 10. もし私が他のメンバーと異なる意見を言っても、メンバーはそれをきちんと聞いてくれると思う。       | 5 | 4 | 3 | 2 | 1 |
| 11. 今は一人ではできないことでも、グループワークによって、いずれは一人でもできるようになる。       | 5 | 4 | 3 | 2 | 1 |
| 12. 他の学生の手助けをすることによって、私たちはさらにしっかり学ぶことができる。             | 5 | 4 | 3 | 2 | 1 |
| 13. グループ内で発言をしている最中に、自分で自分の誤りに気づく。                     | 5 | 4 | 3 | 2 | 1 |

**PART F**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. グループワークの際、私は他のメンバーのよい点を学べる。                   | 5 | 4 | 3 | 2 | 1 |
| 2. グループワークによって、私は他のメンバーをもっと好きになると思う。             | 5 | 4 | 3 | 2 | 1 |
| 3. グループワークの際、他のメンバーは喜んで私を助けてくれると思う。              | 5 | 4 | 3 | 2 | 1 |
| 4. 私は、グループワークの際、喜んで他のメンバーを助ける。                   | 5 | 4 | 3 | 2 | 1 |
| 5. グループで一緒に活動することによって、私たちはお互いをもっとよく知ることができる。     | 5 | 4 | 3 | 2 | 1 |
| 6. グループ内で問題が生じて、私たちは話し合いによって解決することができる。          | 5 | 4 | 3 | 2 | 1 |
| 7. 意見を戦わせたあと、私たちはさらに良い友人になれる。                    | 5 | 4 | 3 | 2 | 1 |
| 8. もし自分がグループワークに参加しなかったら、私はメンバーに悪いことをした気分になる。    | 5 | 4 | 3 | 2 | 1 |
| 9. グループメンバーのうち誰かが自分の分担をきちんとしなかったら、グループは悪い雰囲気になる。 | 5 | 4 | 3 | 2 | 1 |
| 10. グループメンバーともめごとがあっても、私はその人との関係を修復することができる。     | 5 | 4 | 3 | 2 | 1 |



APPENDIX A (continued)

- |                                       |   |   |   |   |   |
|---------------------------------------|---|---|---|---|---|
| 11. グループワークの中では、軽んじられたり無視されたりする人が生じる。 | 5 | 4 | 3 | 2 | 1 |
| 12. グループワークでは、私は他のメンバーに頼りすぎてしまうと思う。   | 5 | 4 | 3 | 2 | 1 |

**PART G**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. 大学の英語の授業ではグループワークより講義形式の方が多く用いられるべきである。           | 5 | 4 | 3 | 2 | 1 |
| 2. 100%講義の授業の方が、講義とグループワークをあわせた授業形式よりも大学の英語教育にふさわしい。 | 5 | 4 | 3 | 2 | 1 |
| 3. 教師のみが知識を学生に伝えるべきである。                              | 5 | 4 | 3 | 2 | 1 |
| 4. 学生は教師に指されたときのみ発言すべきだ。                             | 5 | 4 | 3 | 2 | 1 |
| 5. 大学の授業では、学生が主体的役割を担うべきである。                         | 5 | 4 | 3 | 2 | 1 |
| 6. 教師のみが正しい答えを与えることができる。                             | 5 | 4 | 3 | 2 | 1 |
| 7. 一般的に言って、英語の授業でグループワークをするのは時間の無駄である。               | 5 | 4 | 3 | 2 | 1 |
| 8. どのような授業にしていくなかについて、学生は積極的に関わるべきである。               | 5 | 4 | 3 | 2 | 1 |
| 9. 学生は授業中、自発的に発言すべきである。                              | 5 | 4 | 3 | 2 | 1 |
| 10. 学生と教師の意見が異なるとき、教師は学生の意見を尊重すべきである。                | 5 | 4 | 3 | 2 | 1 |
| 11. 知識は、学生のグループワークによる話し合いからは生じない。                    | 5 | 4 | 3 | 2 | 1 |
| 12. 大学の授業では、学生が自立した学習者になるよう手助けするのが教師の重要な役割の一つである。    | 5 | 4 | 3 | 2 | 1 |

**PART H**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. もし私のグループのメンバーが英語で私に質問したら、英語で答えたい。            | 5 | 4 | 3 | 2 | 1 |
| 2. もし他のメンバーからの手助けが必要な場合には、英語で頼みたい。              | 5 | 4 | 3 | 2 | 1 |
| 3. もしグループメンバーの言ったことがはっきりしなかった場合、英語で質問したい。       | 5 | 4 | 3 | 2 | 1 |
| 4. もし課題が単純なものであれば、私は英語でグループワークをしたい。             | 5 | 4 | 3 | 2 | 1 |
| 5. グループメンバーに同情をしたり、自分の気持ちを伝えたりすることを英語で行いたい。     | 5 | 4 | 3 | 2 | 1 |
| 6. 複雑な課題をグループで行うときは、日本語を使いたい。                   | 5 | 4 | 3 | 2 | 1 |
| 7. もし私の考えや意見が他のメンバーと異なったら、それを英語で言いたい。           | 5 | 4 | 3 | 2 | 1 |
| 8. ジェスチャーなどを一緒に使って、なんとか英語で自分の考えや意見を伝えたい。        | 5 | 4 | 3 | 2 | 1 |
| 9. 英語で複雑な考えを表現したい。                              | 5 | 4 | 3 | 2 | 1 |
| 10. 英語でグループディスカッションのリーダーをしたい。                   | 5 | 4 | 3 | 2 | 1 |
| 11. グループプロジェクトを行うとき、グループメンバーと一緒に、英語を使って計画を立てたい。 | 5 | 4 | 3 | 2 | 1 |
| 12. もしグループワーク中に何か問題が起こったら、英語でその解決策を探したい。        | 5 | 4 | 3 | 2 | 1 |

**APPENDIX B**  
**QUESTIONNAIRE 1 (ENGLISH TRANSLATION OF QUESTIONNAIRE 1)**

**Questionnaire about Group Work (Date: 2005/ MM/ DD)**

[Written Instruction to the Students]

The purpose of this questionnaire is to find out what you think about group work. The results of this questionnaire will be used for research purposes in order to improve English instruction, and they won't be used for any other purposes. I would appreciate it if you would understand the purpose of the questionnaire, and participate in this study by completing it. There are no preferable responses, so please complete the questionnaire based on your honest ideas/feelings. Once you submit this questionnaire, it is understood that you have agreed for its use for research purposes. The results will not affect your course grade at all, so please do not hesitate to respond honestly. When responding, please imagine the situation where you work in a small group (with about two to six members) in English in your English classes. Please do not skip any items, and answer all of the items. If you have any questions, please feel free to contact me.

Kumiko Fushino (email: fushinojp@yahoo.co.jp)

[Biodata]

Department \_\_\_\_\_ Class Name \_\_\_\_\_ Sex: Male•Female Age: \_\_\_ Nationality: \_\_\_\_\_

[Items]

***Part A: Communication Apprehension in Group Work in English Classrooms***

1. I don't like to talk with group members in English class.
2. I feel relaxed when I work in a group in English class.
3. I feel uneasy when I do group work in English class.
4. I like to actively participate in group work in English class.
5. I feel anxious when I work in English class in a group with classmates who I don't know well.
6. I feel nervous when I work in a group in English class.
7. Group work in English class is painful for me.
8. In group work in English class, I feel more comfortable when listening to other members' opinions than talking to group members.
- 9. I want to avoid group work as much as possible in English class.**
- 10. If other members say different opinions from mine, I will be nervous.**
11. When working in group, I feel nervous if I am asked a question by other members.
12. In group work, I can't ask questions to other members because I feel embarrassed.

APPENDIX B (continued)

***Part B: Self-perceived Communication Competence in Group Work in English Classrooms***

1. If my group members ask me questions in English, I can answer them in English.
2. If I need help from my group members, I can ask them in English.
3. I can ask questions in English if a group member says something unclear to me.
4. I can do group work in English if the task is simple.
5. I can show empathy or my feelings to my group members in English.
6. I need to speak Japanese to do a complex task in group work.
7. If I have a different idea or opinion from group members, I can say it in English.
8. I can convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.
9. I can express complex ideas in English.
10. I can lead group discussion in English.
11. I can make a plan for group project in English with group members.
12. If a conflict arises during group work, I can find a way to resolve it in English.

***Part C: Beliefs about the Value of Cooperation***

1. It is important to help other group members when working in group.
2. Group work is important for human growth.
3. Group work is important for human society.
4. Cooperation produces better results than individual work.
5. *Even if individuals can produce good results, it's worth cooperating. (modified)*
6. Cooperation produces better results than competition.
7. *Successful group work means that not only the group but also individual members can reach the goal.*
- 8. If a member of my group does not participate in group work, I will persuade her/him to join.**
9. For group work to succeed, each member needs to do their share of the work.
10. Experience in the process of group work is valuable.
11. Group work is valuable to facilitate students' autonomy.
12. Communication skills developed in group work are useful for my future.
- 13. Group work is a good opportunity for me to understand myself better.**

***Part D: Beliefs about the Efficiency of Group Work***

1. I learn well in group work that does not have teacher-centered instruction.
2. I learn well in group work which is combined with teacher-centered instruction.
- 3. I learn well in a teacher-led class that has no group work.**
4. *I learn efficiently in group work with no teacher-centered instruction.*

APPENDIX B (continued)

5. *I learn efficiently in class where group work and teacher-centered instruction are employed.*
- 6. I learn efficiently in a teacher-led class that does not have group work.**
7. I learn more efficiently when I cooperate with peers than when I work alone in class.
- 8. Knowledge can be obtained through group work as well as in teacher-led classes.**
9. We can come up with good solutions more efficiently in group work than when we work separately in English class.
10. Generally speaking, the students in this class can work well in groups.
11. I can use group work time efficiently for the assigned task.
- 12. Generally speaking, group work is too time-consuming.**

***Part E: Beliefs about the Knowledge Co-Construction/Peer-Scaffolding in Group Work***

- 1. While listening to other members discuss, I will notice my mistakes.**
- 2. We can contribute to our group by sharing our opinions with other members.**
- 3. By listening attentively, we can help other members notice something new.**
4. While discussing with my group members, I can find answers to the questions that I couldn't answer on my own.
5. *Whether or not I speak in group work, I listen carefully to what my group members are saying.*
6. During group work I learn various opinions and ideas from group members.
- 7. I will be willing to listen to my group members if they point out my mistakes.**
- 8. When we work together in group, we can find something that we often overlook when working alone.**
9. *Conclusions reached through group discussion are better than when I think alone.*
- 10. If I present a different view from theirs, my group members will listen to it.**
11. *After working in group, I will eventually be able to do things on my own that I can't do alone now.*
12. *Students who help other group members learn well.*
- 13. When I talk to groupmates, I will notice my mistakes.**

***Part F: Beliefs about the Relationship with Other Group Members***

1. I can learn from other group members.
2. Group work enables me to like my group members more.
3. Group members will be willing to help me in group work.
4. I will willingly help other group members in group work.
- 5. By working together in group work, we can better understand each other.**

APPENDIX B (continued)

6. **Even if there is a conflict, we can resolve it by working together.**
7. **After some argument in group work, we can become better friends.**
8. *I feel guilty if I don't participate in group work.*
9. *If someone in my group doesn't do her/his share of work, the atmosphere of the group will become bad.*
10. **After a conflict with my group member, I can fix the relationship with her/him.**
11. **When working in group, a few members will be treated lightly or ignored by other members.**
12. **In group work, I will depend too much on my group members.**

***Part G: Beliefs about the Teacher/Student Roles in College English Classrooms***

1. **Lecture style should be employed in college English classes more often than group work.**
2. *100% teacher-led classes are more suitable for college education than classes that combine teacher lecture and group work.*
3. *The teacher is the only one who should convey knowledge to students.*
4. *Students should speak only when they are called on by the teacher.*
5. *In college classes, students should play the central role.*
6. **The teacher is the only one who can provide right answers.**
7. **Generally speaking, it is waste of time to do group work in English classes.**
8. *Students should be involved in deciding how their English classes are organized.*
9. *Students should say their opinions voluntarily in class.*
10. *When the teacher's opinion is different from the student, the teacher should value the student's opinion.*
11. *Knowledge cannot be produced by discussion in group work.*
12. *In college classes, one of the teachers' important roles is to help students become autonomous learners.*

***Part H: Willingness to Communicate in L2 Group Work***

1. *If my group members ask me questions in English, I want to answer them in English.*
2. *If I need a help from my group members, I want to ask them in English.*
3. *I want to ask questions in English if a group member says something unclear to me.*
4. *I want to do group work in English if the task is simple.*
5. *I want show empathy or my feelings to my group members in English.*
6. *I want to speak some Japanese to do a complex task in L2 group work.*
7. *If I have a different idea or opinion from group members, I want to say it in English.*

APPENDIX B (continued)

8. I want to convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.
9. I want to express complex ideas in English.
10. I want to lead group discussion in English.
11. I want to make a plan for group project in English with group members.
12. If a conflict arises during group work, I want to find a way to resolve it in English.

*Note.* All the questionnaire items are 5-point Likert scale items. In Parts A, C, D, E, F, and G, the items newly added for this study are in bold and modified from the previous questionnaire are in italics. The items with the underlined numbers were reverse coded.

**APPENDIX C**  
**QUESTIONNAIRE 2 (JAPANESE VERSION, FOR COM STUDENTS)**

グループワークについてのアンケート No. 2 (記入日: 2005年7月\_\_\_日)  
(COM用)

このアンケートは皆さんのグループワークについての考え方を知るためのものです。学期の初めに実施したアンケートと似ていますが、減った項目、新たに増えた項目がありますので、**新たな気持ちでお答えください**。このアンケートの結果は、授業を向上させるのに役立つよう、研究目的に使用させていただきます。それ以外の目的では一切使用いたしません。どうぞご理解の上、ご協力をよろしくお願いいたします。望ましい回答というものはありませんので、正直にお考えをお聞かせ下さい。また、このアンケートの提出をもって、結果の研究使用に同意していただいたものとみなさせていただきます。成績には一切関係いたしませんので安心して正直にお答えください。ご不明の点などありましたら遠慮なくお尋ねください。どうぞよろしくお願いいたします。

伏野 久美子 (Email: fushinojp@yahoo.co.jp)

**★まず、あなたについて教えてください★**

学部\_\_\_\_\_ このクラスの名前 \_\_\_\_\_ 性別: 男・女 年齢: \_\_\_才 国籍: \_\_\_\_\_

**★今期の授業についてお尋ねします★**

**COM コースの方**

1) どのクラスを受けましたか? 受けたクラスに○をつけてください。(全員が取るクラスにはもう○がついています。)

2) 各クラスで、授業時間の何パーセントぐらいグループワーク(ペアワークを含む)が行われたと思いますか?

コースを振り返って、**自分の感覚**でお答えください。  
先生1、先生2はどちらがどちらでもかまいません。

○がついていないもので、自分が受けたクラスに○をつけてください。		該当するところに○をつけてください。					
		0%	1~20%	21~40%	41~60%	61~80%	81%以上
<input type="checkbox"/>	OC (2レッスンとも同じ先生)						
<input type="checkbox"/>	OC (別々の先生)						
	先生1の クラス						
	先生2の クラス						
<input type="checkbox"/>	Listening						
<input type="checkbox"/>	Reading & Writing (R&W)						

グループワークについての質問はこの裏のページから始まります。

APPENDIX C (continued)

**★英語のクラス(特定のクラスではない)でのグループワークについての質問★**

**英語の授業(このアンケートを実施しているクラスに限らず)で、英語でグループワーク(2～6人ぐらいのメンバー)をすることを想定してお答えください。質問は全部で6パート(3ページ)あり、パートごとに項目があります。それがどれくらい自分の考えや気持ちと一致するかを 1～5に○をつけてお答えください。質問は飛ばさないですべてお答えください。**

5: すごくそう思う	4: 少しそう思う	3: どちらとも言えない
2: あまりそうは思わない	1: 全然そうは思わない	

**PART A**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. 英語のクラスでグループワークを行っているとき、リラックスしている。                   | 5 | 4 | 3 | 2 | 1 |
| 2. 英語のクラスでグループワークを行っているとき、落ち着かない。                      | 5 | 4 | 3 | 2 | 1 |
| 3. 英語のクラスで、あまりよく知らない人と一緒にグループワークをするとき不安に感じる。           | 5 | 4 | 3 | 2 | 1 |
| 4. 英語のクラスで、グループワークをするとき、緊張してどきどきする。                    | 5 | 4 | 3 | 2 | 1 |
| 5. 英語のクラスでグループワークするのは苦痛だ。                              | 5 | 4 | 3 | 2 | 1 |
| 6. 英語のクラスでグループワークをするとき、発言するより他の人の意見を聞いているほうがリラックスしている。 | 5 | 4 | 3 | 2 | 1 |
| 7. 英語のクラスでのグループワークはできるだけしたくない。                         | 5 | 4 | 3 | 2 | 1 |
| 8. 英語のクラスでもしグループメンバーが自分と違う意見を言ったら、緊張する。                | 5 | 4 | 3 | 2 | 1 |
| 9. 英語のクラスでグループワークの際、他のメンバーから質問されるとどきどきする。              | 5 | 4 | 3 | 2 | 1 |
| 10. 英語のクラスでグループワークの際、恥ずかしくて他のメンバーに質問できない。              | 5 | 4 | 3 | 2 | 1 |

**PART B**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. もし私のグループのメンバーが英語で私に質問したら、英語で答えることができる。       | 5 | 4 | 3 | 2 | 1 |
| 2. もし他のメンバーからの手助けが必要な場合には、英語で頼むことができる。          | 5 | 4 | 3 | 2 | 1 |
| 3. もしグループメンバーの言ったことがはっきりしなかった場合、英語で質問することができる。  | 5 | 4 | 3 | 2 | 1 |
| 4. もし課題が単純なものであれば、私は英語だけでグループワークができる。           | 5 | 4 | 3 | 2 | 1 |
| 5. グループメンバーに同情をしたり、自分の気持ちを伝えたりすることが英語でできる。      | 5 | 4 | 3 | 2 | 1 |
| 6. もし私の考えや意見が他のメンバーと異なったら、それを英語で言うことができる。       | 5 | 4 | 3 | 2 | 1 |
| 7. ジェスチャーなどを一緒に使えば、なんとか英語で自分の考えや意見を伝えることができる。   | 5 | 4 | 3 | 2 | 1 |
| 8. 英語で複雑な考えを表現することができる。                         | 5 | 4 | 3 | 2 | 1 |
| 9. グループプロジェクトを行うとき、グループメンバーと一緒に、英語を使って計画を立てられる。 | 5 | 4 | 3 | 2 | 1 |
| 10. もしグループワーク中に何か問題が起こったら、英語でその解決策を探すことができる。    | 5 | 4 | 3 | 2 | 1 |



APPENDIX C (continued)

**PART C**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. グループワークは人間の成長にとって大切だ。                   | 5 | 4 | 3 | 2 | 1 |
| 2. グループワークは社会生活をする上で大切だ。                   | 5 | 4 | 3 | 2 | 1 |
| 3. グループワークの過程で得られる経験は私にとって貴重である。           | 5 | 4 | 3 | 2 | 1 |
| 4. グループワークは学生の自立を促進するのに役立つ。                | 5 | 4 | 3 | 2 | 1 |
| 5. グループワークで得られたコミュニケーションのスキルは私の将来にとって役に立つ。 | 5 | 4 | 3 | 2 | 1 |
| 6. グループワークは私自身をよりよく知るためのよい機会である。           | 5 | 4 | 3 | 2 | 1 |

**PART D**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. グループワークのない教師主体による指導だけの授業で、私はしっかり学習できる。            | 5 | 4 | 3 | 2 | 1 |
| 2. グループワークのない教師主体による指導だけの授業で、私は効率よく学習できる。            | 5 | 4 | 3 | 2 | 1 |
| 3. 大学の英語の授業ではグループワークより講義形式の方が多く用いられるべきである。           | 5 | 4 | 3 | 2 | 1 |
| 4. 100%講義の授業の方が、講義とグループワークをあわせた授業形式よりも大学の英語教育にふさわしい。 | 5 | 4 | 3 | 2 | 1 |
| 5. 教師のみが知識を学生に伝えるべきである。                              | 5 | 4 | 3 | 2 | 1 |
| 6. 学生は教師に指されたときのみ発言すべきだ。                             | 5 | 4 | 3 | 2 | 1 |
| 7. 教師のみが正しい答えを与えることができる。                             | 5 | 4 | 3 | 2 | 1 |
| 8. 一般的に言って、英語の授業でグループワークをするのは時間の無駄である。               | 5 | 4 | 3 | 2 | 1 |

**PART E**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. 他のメンバーが話し合っているのを聞いているうちに、私は自分の間違いに気づく。              | 5 | 4 | 3 | 2 | 1 |
| 2. グループメンバーの話を一生懸命に聞くことによって、他のメンバーが何か新しいことに気づく手助けができる。 | 5 | 4 | 3 | 2 | 1 |
| 3. グループメンバーと話し合っている間に、自分一人ではわからなかった問題の答えを見つけることができる。   | 5 | 4 | 3 | 2 | 1 |
| 4. 私は、自分が発言をしているとしないに関わらず、他のメンバーの発言を注意深く聞く。            | 5 | 4 | 3 | 2 | 1 |
| 5. グループワークの際、私はグループメンバーからいろいろな意見や考えを学ぶと思う。             | 5 | 4 | 3 | 2 | 1 |
| 6. もしグループメンバーが私の間違いを指摘してくれたら、私はそれを喜んで聞く。               | 5 | 4 | 3 | 2 | 1 |
| 7. 一緒にグループ活動をするとき、一人ではしばしば見逃していたような点に気づくことができる。        | 5 | 4 | 3 | 2 | 1 |
| 8. グループワークで達した結論は、私一人で考えたものよりも優れている。                   | 5 | 4 | 3 | 2 | 1 |
| 9. もし私が他のメンバーと異なる意見を言っても、メンバーはそれをきちんと聞いてくれると思う。        | 5 | 4 | 3 | 2 | 1 |
| 10. 今は一人ではできないことでも、グループワークによって、いずれは一人でもできるようになる。       | 5 | 4 | 3 | 2 | 1 |
| 11. 他の学生の手助けをすることによって、私たちはさらにしっかり学ぶことができる。             | 5 | 4 | 3 | 2 | 1 |
| 12. グループ内で発言をしている最中に、自分で自分の誤りに気づく。                     | 5 | 4 | 3 | 2 | 1 |
| 13. グループワークの際、私は他のメンバーのよい点を学べる。                        | 5 | 4 | 3 | 2 | 1 |
| 14. グループワークによって、私は他のメンバーをもっと好きになると思う。                  | 5 | 4 | 3 | 2 | 1 |

APPENDIX C (continued)

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 15. グループワークの際、他のメンバーは喜んで私を助けてくれると思う。          | 5 | 4 | 3 | 2 | 1 |
| 16. 私は、グループワークの際、喜んで他のメンバーを助ける。               | 5 | 4 | 3 | 2 | 1 |
| 17. グループで一緒に活動することによって、私たちはお互いをもっとよく知ることができる。 | 5 | 4 | 3 | 2 | 1 |
| 18. グループ内で問題が生じて、私たちは話し合いによって解決することができる。      | 5 | 4 | 3 | 2 | 1 |
| 19. 意見を戦わせたあと、私たちはさらに良い友人になれる。                | 5 | 4 | 3 | 2 | 1 |
| 20. グループメンバーともめごとがあっても、私はその人との関係を修復することができる。  | 5 | 4 | 3 | 2 | 1 |

**PART F** 次の場合には、どうしますか？

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. もし私のグループのメンバーが私に英語で質問したら、英語で答えるつもりだ。           | 5 | 4 | 3 | 2 | 1 |
| 2. もし他のメンバーからの手助けが必要な場合には、英語で頼むつもりだ。              | 5 | 4 | 3 | 2 | 1 |
| 3. もしグループメンバーの言ったことがはっきりしなかった場合、英語で質問するつもりだ。      | 5 | 4 | 3 | 2 | 1 |
| 4. もし課題が単純なものであれば、私は英語だけでグループワークをするつもりだ。          | 5 | 4 | 3 | 2 | 1 |
| 5. グループメンバーに同情をしたり、自分の気持ちを伝えたりすることを英語で行うつもりだ。     | 5 | 4 | 3 | 2 | 1 |
| 6. もし私の考えや意見が他のメンバーと異なったら、それを英語で言うつもりだ。           | 5 | 4 | 3 | 2 | 1 |
| 7. ジェスチャーなどを一緒に使って、なんとか英語で自分の考えや意見を伝えるつもりだ。       | 5 | 4 | 3 | 2 | 1 |
| 8. 英語で複雑な考えを表現するつもりだ。                             | 5 | 4 | 3 | 2 | 1 |
| 9. グループプロジェクトを行うとき、グループメンバーと一緒に、英語を使って計画を立てるつもりだ。 | 5 | 4 | 3 | 2 | 1 |
| 10. もしグループワーク中に何か問題が起こったら、英語でその解決策を探すつもりだ。        | 5 | 4 | 3 | 2 | 1 |

これで終了です。お疲れ様でした。

ご協力どうもありがとうございました。

なお、このアンケートについて何かご質問がありましたら、下記までご連絡ください。

伏野久美子 Email: fushinojp@yahoo.co.jp

**APPENDIX D**  
**QUESTIONNAIRE 2**  
**(ENGLISH TRANSLATION OF QUESTIONNAIRE 2, FOR COM STUDENTS)**

**Questionnaire about Group Work (Date: 2005/ MM/ DD)**

[Written Instruction to the Students]

The purpose of this questionnaire is to find out what you think about group work. This questionnaire is similar to the one you filled out at the beginning of the semester. However, there are some excluded items as well as newly added items in this questionnaire. So please answer with a fresh feeling. The results of this questionnaire will be used for research purposes in order to improve English instruction, and they won't be used for any other purposes. I would appreciate it if you would understand the purpose of the questionnaire, and participate in this study by completing it. There are no preferable responses, so please complete the questionnaire based on your honest ideas/feelings. Once you submit this questionnaire, it is understood that you have agreed for its use for research purposes. The results will not affect your course grade at all, so please do not hesitate to respond honestly. If you have any questions, please feel free to contact me.  
 Kumiko Fushino (email: fushinojp@yahoo.co.jp)

[Biodata]

Department \_\_\_\_\_ Class Name \_\_\_\_\_ Sex: Male•Female Age: \_\_\_ Nationality: \_\_\_\_\_

[Use of Group Work in Class]

**For the students in the COM Course**

- 1) What classes did you take? Please place a circle (○) beside the classes you took.  
 (The circles are already placed beside the classes that all students took.)
- 2) About what percentage of the class time do you think was spent on group work (including pair work) in each class?  
 Please reflect on the courses, and answer based on your perception.  
 It does not matter who is Teacher 1 or Teacher 2.

Place a ○ to the classes you took.		Place a ○ in the appropriate spaces.					
		0%	1~20%	21~40%	41~60%	61~80%	>81%
	OC (the same teacher for both lessons)						
	OC (two teachers)	Teacher 1's Class					
		Teacher 2's Class					
○	Listening						
○	Reading & Writing (R&W)						

APPENDIX D (continued)

[Items]

***Part A: Communication Apprehension in Group Work***

1. I feel relaxed when I work in a group in English class.
2. I feel uneasy when I do group work in English class.
3. I feel anxious when I work in English class in a group with classmates who I don't know well.
4. I feel nervous when I work in a group in English class.
5. Group work in English class is painful for me.
6. In group work in English class, I feel more comfortable when listening to other members' opinions than talking to group members.
7. I want to avoid group work as much as possible in English class.
8. If other members say different opinions from mine, I will be nervous.
9. When working in group, I feel nervous if I am asked a question by other members.
10. In group work, I can't ask questions to other members because I feel embarrassed.

***Part B: Self-perceived Communication Competence in Group Work***

1. If my group members ask me questions in English, I can answer them in English.
2. If I need a help from my group members, I can ask them in English.
3. I can ask questions in English if a group member says something unclear to me.
4. I can do group work only in English if the task is simple.
5. I can show empathy or my feelings to my group members in English.
6. If I have a different idea or opinion from group members, I can say it in English.
7. I can convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.
8. I can express complex ideas in English.
9. I can make a plan for group project in English with group members.
10. If a conflict arises during group work, I can find a way to resolve it in English.

***Part C: Positive Beliefs of the Value of Group Work***

1. Group work is important for human growth.
2. Group work is important for human society.
3. Experience in the process of group work is valuable.
4. Group work is valuable to facilitate students' autonomy.
5. Communication skills developed in group work are useful for my future.
6. Group work is a good opportunity for me to understand myself better.

APPENDIX D (continued)

***Part D: Negative Traditional Instruction Orientation***

1. I learn well in a teacher-led class that has no group work.
2. I learn efficiently in a teacher-led class that does not have group work.
3. Lecture style should be employed in college English classes more often than group work.
4. 100% teacher-led classes are more suitable for college education than classes that combine teacher lecture and group work.
5. The teacher is the only one who should convey knowledge to students.
6. Students should speak only when they are called on by the teacher.
7. The teacher is the only one who can provide right answers.
8. Generally speaking, it is waste of time to do group work in English classes.

***Part E: Beliefs of Group Work Usefulness***

1. While listening to other members discuss, I will notice my mistakes.
2. By listening attentively, we can help other members notice something new.
3. While discussing with my group members, I can find answers to the questions that I couldn't answer on my own.
4. Whether or not I speak in group work, I listen carefully to what my group members are saying.
5. During group work I learn various opinions and ideas from group members.
6. I will be willing to listen to my group members if they point out my mistakes.
7. When we work together in group, we can find something that we often overlook when working alone.
8. Conclusions reached through group discussion are better than when I think alone.
9. If I present a different view from theirs, my group members will listen to it.
10. After working in group, I will eventually be able to do things on my own that I can't do alone now.
11. Students who help other group members learn well.
12. When I talk to groupmates, I will notice my mistakes.
13. I can learn from other group members.
14. Group work enables me to like my group members more.
15. Group members will be willing to help me in group work.
16. I will willingly help other group members in group work.
17. By working together in group work, we can better understand each other.
18. Even if there is a conflict, we can resolve it by working together.
19. After some argument in group work, we can become better friends.
20. After a conflict with my group member, I can fix the relationship with her/him.

APPENDIX D (continued)

***Part F: Willingness to Communicate in L2 Group Work***

***What would you do if you were in the following situation?***

1. If my group members ask me questions in English, I am willing to answer them in English.
2. If I need help from my group members, I am willing to ask them in English.
3. I am willing to ask questions in English if a group member says something unclear to me.
4. I am willing to do group work only in English if the task is simple.
5. I am willing show empathy or my feelings to my group members in English.
6. If I have a different idea or opinion from group members, I am willing to say it in English.
7. I am willing to convey my opinions/ideas in English with the help of gestures or other non-verbal means during group work.
8. I am willing to express complex ideas in English.
9. I am willing to make a plan for group project in English with group members.
10. If a conflict arises during group work, I am willing to find a way to resolve it in English.

*Note.* All the questionnaire items are 5-point Likert scale items. The items with the underlined numbers were reverse coded.

**APPENDIX E**  
**THE FRONT PAGE OF QUESTIONNAIRE 2**  
**(JAPANESE VERSION, FOR LAC STUDENTS)**

グループワークについてのアンケート No. 2 (記入日: 2005年7月\_\_\_日)  
(LAC 用)

このアンケートは皆さんのグループワークについての考え方を知るためのものです。学期の初めに実施したアンケートと似ていますが、減った項目、新たに増えた項目がありますので、**新たな気持ちでお答えください**。このアンケートの結果は、授業を向上させるのに役立つよう、研究目的に使用させていただきます。それ以外の目的では一切使用いたしません。どうぞご理解の上、ご協力をよろしくお願いいたします。望ましい回答というものはありませんので、正直にお考えをお聞かせ下さい。また、このアンケートの提出をもって、結果の研究使用に同意していただいたものとみなさせていただきます。成績には一切関係いたしませんので安心して正直にお答えください。ご不明の点などありましたら遠慮なくお尋ねください。どうぞよろしくお願いいたします。

伏野 久美子 (Email: fushinojp@yahoo.co.jp)

**★まず、あなたについて教えてください★**

学部 \_\_\_\_\_ このクラスの名前 \_\_\_\_\_ 性別: 男・女 年齢: \_\_\_才 国籍: \_\_\_\_\_

**★今期の授業についてお尋ねします★**

**LACコースの方**

- 1) どのクラスを受けましたか? 受けたクラスに○をつけてください。
- 2) 各クラスで、授業時間の何パーセントぐらいグループワーク(ペアワークを含む)が行われたと思いますか?  
     ↓  
     コースを振り返って、**自分の感覚**でお答えください。

○がついていないもので、自分が受けたクラスに○をつけてください。	該当するところに○をつけてください。					
	0%	1~20%	21~40%	41~60%	61~80%	81%以上
<input type="checkbox"/> L & R (Reading)						
<input type="checkbox"/> L & R (Listening)						
<input type="checkbox"/> Extensive Reading						
<input type="checkbox"/> Learning with Video						
<input type="checkbox"/> Intercultural Communication						

グループワークについての質問はこの裏のページから始まります。

*Note.* The body of the questionnaire for the LAC students was the same as that for the COM students. See Appendices C and D for the items on the questionnaire.

**APPENDIX F**  
**THE FRONT PAGE OF QUESTIONNAIRE 2**  
**(ENGLISH TRANSLATION, FOR LAC STUDENTS)**

**Questionnaire about Group Work No. 2 (Date: 2005/ MM/ DD)**

**[Written Instruction to the Students]**

The purpose of this questionnaire is to find out what you think about group work. This questionnaire is similar to the one you filled out at the beginning of the semester. However, there are some excluded items as well as newly added items in this questionnaire. So please answer with a fresh feeling. The results of this questionnaire will be used for research purposes in order to improve English instruction, and they won't be used for any other purposes. I would appreciate it if you would understand the purpose of the questionnaire, and participate in this study by completing it. There are no preferable responses, so please complete the questionnaire based on your honest ideas/feelings. Once you submit this questionnaire, it is understood that you have agreed for its use for research purposes. The results will not affect your course grade at all, so please do not hesitate to respond honestly. If you have any questions, please feel free to contact me.

Kumiko Fushino (email: fushinojp@yahoo.co.jp)

**[Biodata]**

Department \_\_\_\_\_ Class Name \_\_\_\_\_ Sex: Male•Female Age:\_\_\_ Nationality:\_\_\_\_\_

**[Use of Group Work in Class]**

**For the students in the LAC Course**

1) What classes did you take? Please place a circle (○) beside the classes you took. (The circles are already placed beside the classes that all students took.)

2) About what percentage of the class time do you think was spent on group work (including pair work) in each class?

Please reflect on the courses, and answer based on your perception.

It does not matter which was Teacher 1 or Teacher 2.

Place a ○ to the classes you took.	Place a ○ in the appropriate spaces.					
	0%	1~20%	21~40%	41~60%	61~80%	>81%
<input type="radio"/> L & R (Reading)						
<input type="radio"/> L & R (Listening)						
<input type="checkbox"/> Extensive Reading						
<input type="checkbox"/> Learning with Video						
<input type="checkbox"/> Intercultural Communication						

*Note.* The body of the questionnaire for the LAC students was the same as that for the COM students. See Appendices C and D for the items on the questionnaire.



**APPENDIX G**  
**INSTRUCTIONS FOR THE QUESTIONNAIRE ADMINISTRATORS**  
**(FOR JAPANESE TEACHERS)**

グループワークについてのアンケート実施上のお願い事項

\_\_\_\_\_先生  
(実施クラス : \_\_\_\_\_ )  
伏野 久美子

このたびは、私の研究のために「グループワークについてのアンケート」実施にご協力いただけましたとのこと、本当にありがとうございます。

さて、実施にあたり、お願い事項がありますので、下記をご熟読の上、実施して下さいますようよろしくお願いいたします。

1. クラス内で実施していただける場合には、配布・説明も含めて回答時間を大体25分ぐらい与えていただければよろしいかと思えます。(学生協力者に時間を計ってもらったところ、約10分で全部回答できたそうです。)
2. アンケート上部の四角で囲んである部分については、先生が実際に日本語で音読していただければ幸いです。特に下線部ははっきりとお読みください。また、両面印刷なので、回答する部分は合計4ページあることも付け加えてご説明いただければと思います。くれぐれも裏のページに回答するのを忘れないように念押しをお願いいたします。
3. 家で回答をしてきてもらうようになさる場合にも上記「2」はクラス内で行っていただけますと幸いです。
4. **★まず、あなたについて教えてください★**の部分は、一緒にやらせて、記入漏れがないようお願いいたします。
5. それ以降は、各自のペースで回答してもらってください。全員が最後まで記入できたことを確認してから、ご回収願います。
6. アンケートを回収されましたら、お手数でも、先日お渡ししたEXPACKに入れて、先生のお名前、ご住所などを記入の上、ポストに入れていただけますようお願いいたします。なお、その際、EXPACKの下の方に「ご依頼主様保管用シール」という黄色と赤のシールがありますので、それをはがしてお手許に保存しておいていただけますようお願いいたします。

お手数をおかけいたしますが、どうぞよろしくお願いいたします。

**APPENDIX H**  
**INSTRUCTIONS FOR THE QUESTIONNAIRE ADMINISTRATORS**  
**(FOR NATIVE SPEAKER ENGLISH TEACHERS)**

*Note.* This was sent to part of email to one of the native speaker of English teachers. I will present only the administration instruction part.

[Instruction]

I would appreciate it if you administer the questionnaire in class on the first day, but if you've already decided what to do in class, you can ask your students to do the questionnaire at home and bring them to next class. I'm sorry you have to administer the questionnaire in so many classes. I do appreciate your cooperation.

When you administer the questionnaire, please tell the students to read the directions and items carefully and not to skip any items. Also please remind the students that there are 4 pages (printed on the both side of each paper) so, do not forget to answer the items written on the back side of the paper.

Probably, 20 minutes would be enough for the students to fill out the questionnaire, but please make sure all students complete responding all the items.

I'm attaching a short explanation of the purpose of my research and English translation of the questionnaire items. So, if students ask you the purpose of the study, please explain it based on the explanation sheet (although it's briefly written on the questionnaire sheet). If you have any questions, please do not hesitate to ask me. I'm also attaching the real questionnaire (Japanese) just for your reference. Please do not make photocopies since I'll do it myself.

When you collect the questionnaires, please use the EXPACK I handed in last Saturday. All you have to do are to write your name and address and put it in a post. Please strip the "Sender to Keep" sticker and keep it before you put the EXPACK in a post.