NOTE TO USERS

Computer-Mediated Communication:
A Vehicle for Field-of-Study Work and Motivation
in the Quebec CEGEP Second Language Classroom

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ABSTRACT

Computer-Mediated Communication:

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Caroline Elizabeth Orton

The objective of this thesis was to explore a potential computer-mediated communication (CMC) solution to two problems facing English-as-a-second-language CEGEP teachers. Firstly, teachers who are required to have a field-of-study component in their courses often place students in groups for field-of-study projects. Yet, classes contain many students who are alone in their programs. Secondly, some students lack motivation for learning a second language, which affects their ability to achieve successful learning outcomes.

Three hypotheses were tested in a quasi-experimental study with three experimental and two comparison groups. They were:

1. Using a CMC bulletin board (BB) will provide students with sufficient partners in their fields to enable them to fulfil the course's field-of-study component.
2. Participants engaged in group tasks by BB will be more motivated than participants engaged in similar group tasks face-to-face.
3. Learning outcomes will be higher for participants engaged in group tasks by BB than for participants engaged in similar group tasks face-to-face.

These hypotheses were not confirmed. Nevertheless, CMC provided some students with field-of-study partners they would not otherwise have had. It also

connected students from different English classes, who continued to work together. Finally, using CMC in the English-as-a-second-language classroom is a viable alternative to using traditional methods in that it leads to similar levels of motivation and language learning success. However, a CMC modality should be used with sound pedagogical goals in mind, for activities which require it, and it should not be assumed to be more motivating for students than face-to-face work.

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Chapter 1: Introduction

1.1 Introduction

The purpose of this study is to examine the feasibility and motivational impact of using computer-mediated communication, specifically bulletin boards, within the Quebec CEGEP[1] second language classroom.

1.2 Context

For CEGEP students in Quebec, there are A-Block (the first of the two compulsory courses) and B-Block (the second of the two compulsory courses) English as a second language (ESL) courses at four different levels. In the B-Block courses, the Quebec Ministry of Education requires that some of the activities and materials be "liées à son champ d'études", or related to their fields of study (Quebec Ministry of Education, 2003, Paragraph 28). In other words, ESL teachers are now being asked to incorporate material that is related to the students' fields of study into the B-Block courses, or the second of the two compulsory ESL courses, they teach. In order to accomplish this, the Ministry recommends that CEGEPs stream by field of study. However, for logistical reasons, which will be explained later, this is not done in the majority of CEGEPs. The division is generally into pre-university (PU) or technical (TQ) at each level from the lower-intermediate students (00) through the intermediate-level (01) to advanced-level (02), and finally to the bilingual students (03). In a few CEGEPs, they are not even divided by program at all.

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[1] *Collège d'enseignement général et professionnel.*

As a result, although students are grouped according to language level with a placement test taken at the beginning of the previous term, and have also already completed the A-block course, they are not homogenous in terms of interest or expectation in the B-Block courses. It would not be uncommon for teachers to find themselves with students from fifteen or more different programs in the same ESL class. With such diversity, it is not possible to provide material for students in each program. It would take too much time and most teachers would lack the expertise. To address this issue, many teachers assign field-of-study projects as group work in which students from the same programs work together to find field-related readings, learn the vocabulary, and conduct research on various aspects of their chosen areas of study. However, there are inevitably a few students left to work alone as the only representative members of their particular program in their ESL class.

Another issue surrounding the use of group work by teachers at the CEGEP level is related to the amount of work they feel that they can ask the students to do outside of the classroom. Students often have full schedules, which makes it challenging (if not impossible) for them to find a compatible time to meet others outside of class hours to complete group assignments. Faced with this reality, teachers often limit the amount of group work they ask their students to do to that which can be completed within class time. In a fifteen-week, 45-hour course, this means that little field-of-study group work can be done on a regular basis.

In addition to this difficulty, many CEGEP students lack motivation for learning a second language, especially when the courses are obligatory. This can have a

detrimental effect on some students' ability to achieve success in their language courses.

Computer-assisted language learning (CALL), specifically in terms of computer-mediated communication (CMC), in the form of an electronic bulletin board (BB) may potentially address these issues in the CEGEP situation. The review of the literature in the next chapter brings together research in the areas of motivation and CMC. The findings in the studies examining the relationship between CMC and motivation have lead to a set of hypotheses related to the problems outlined above. A study designed to test these hypotheses is the subject of this thesis.

Chapter 2: Literature Review

2.1 Introduction

Studies show that motivation is related to language achievement (Gardner, 1985, 2000; Gardner & Lambert, 1959, 1972; Gardner & MacIntyre, 1993; Skehan, 1991 among others). In an article on learning conditions, aptitude complexes and second language acquisition (SLA), Robinson (2002) proposes a framework for further research and pedagogy in this area, in which he states that

> individual differences in aptitude and motivation have been shown to correlate highly with variation in SLA outcomes, and to be the most robust predictors of instructed language learning success (as measured predominantly by measures of achievement and proficiency). (p.122)

Researchers in such varying fields as psychology, social-psychology, neurobiology, education, computer sciences, systems management, SLA, computer-aided instruction (CAI) and computer-assisted language learning (CALL), have all looked at the role of motivation in learning. What has always made motivation a challenging topic to research in all branches of learning is that it is not directly measurable or observable.

Keller (1983) provides a definition of motivation which works well for the purposes of this thesis. He states that

> motivation, by definition, refers to the magnitude and direction of behaviour. In other words, it refers to the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they will exert in that respect. (p. 389)

2.2 Motivation

2.2.1 Early research

Early research in the area of motivation in SLA was conducted by social-psychologists, Gardner and Lambert, who posited two motivational orientations for learning a second language. Using Mowrer's (1950) first language (L1) *theory of identification*, which states that it is important for a child to identify with and feel positively towards the parent in learning a first language, they determined an integrative motivation to be of importance in the learning of a second language (L2). They considered this integrative orientation to reflect the individual's desire to integrate into the target language community. To this they added an instrumental motivation, placing it at the other end of the language learning motivational continuum. With this instrumental orientation the individual sees no point to learning the language for its own sake, but rather sees the learning of the language as instrumental to a goal, such as getting a better job or a pay raise. The first orientation, the integrative motivation, in which learners do learn the second language for its own sake, Gardner and Lambert considered to be of higher value than the instrumental motivation to the learner in terms of the overall effect of the motivation and the competency achieved in the L2.

In Gardner and Lambert's seminal study (1959, 1972), 43 male and 32 female English-speaking high school students studying French in grade eleven were given a battery of tests. The variables under study included L2 achievement, aptitude, orientation (reason for learning L2), attitude and motivational intensity, among others. Then, using factor analysis, Gardner and Lambert distinguished two separate factors

which correlated significantly with achievement in French: linguistic aptitude and motivation. Further, they emphasized that the motivational factor they found was "of a particular type, *characterized by a willingness to be like valued members of the language community*"(1972, p.196). In other words, they found that, in Montreal, a motivation with an integrative orientation was significantly more important than a motivation with an instrumental orientation for success in L2 learning.

Prior to the publication of this exploratory study, linguistic aptitude was presumed to be the only major factor associated with second language achievement (Gardner & Lambert, 1972). Gardner and Lambert's research inspired further study into motivation in the field of second language acquisition (SLA) and heavily influenced it. Now, it is generally accepted that motivation is an important factor in L2 learning and achievement.

For three decades, motivation was largely seen as stable (a fixed attribute), and the integrative or instrumental orientations, which imply that social attitudes influence motivation, underlay much of the research of this period. Schumann's acculturation model (1975) looked to identify causal variables behind language acquisition in a natural context. He proposed that the degree with which a learner acculturated, or integrated with the target language (TL) group, would determine the success in the TL. The variables that he identified as influential to second language learning are social, affective, personality, cognitive, biological, aptitude, personal, input and instructional. These variables reflect motivation in the way of Gardner and Lambert: in terms of social attitudes.

Clément (1980) is another researcher who saw the social context as an important factor in SLA. His model of second language acquisition posited two opposing drives: integrativeness, which leads to a strong level of motivation, and the fear of assimilation, which leads to a lack of motivation. He further suggested that for learners in direct contact with the target community, self-confidence determines the attitude the learner will have towards the community, as well as the amount of effort they will expend on learning the TL.

Gardner (1985) defined motivation as the "effort, want (desire), and affect associated with learning a second language and is seen as important in determining how actively the individual works to acquire language material" (p.147). In this social psychology publication, in which he further clarified and developed many of the theories of his earlier work with Lambert, he proposed a socio-educational model of second language acquisition which he suggested has an empirical basis and encompasses many of the theoretical models of his day (p.124-154) (see Figure 1).

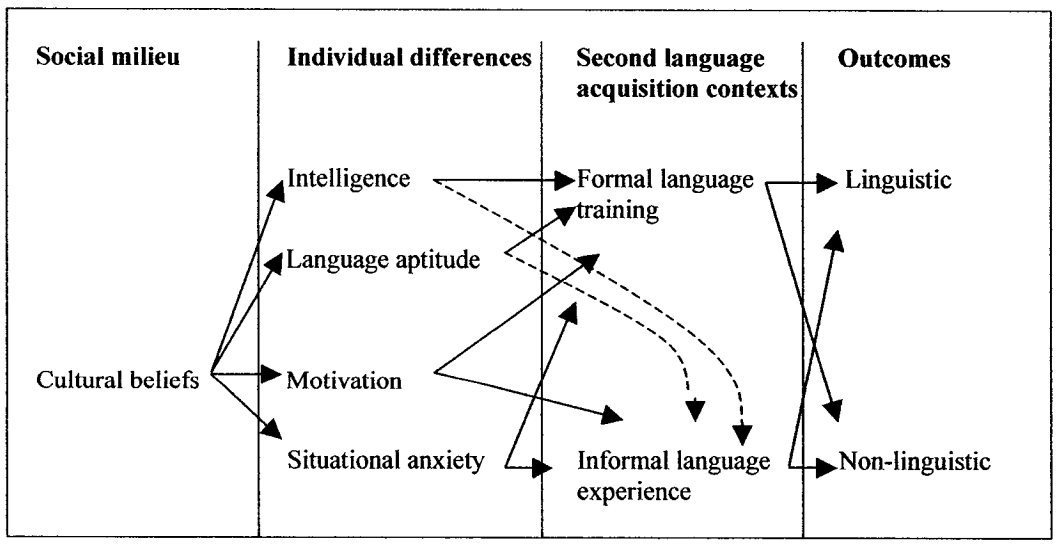


Figure 1. Gardner's Socio-Educational Model (1985, p.147).

In this model, he suggested that cultural beliefs play a central role in that the community's beliefs will directly influence the level of acquisition of the L2, in part by determining which individual differences will come into play. Gardner reiterated at this point that the integrative motive incorporates both the variable of attitude and that of motivation. In fact, he argued that attitudes, especially those held towards other cultural groups, underlie motivation, and indeed create the foundation which sustains it.

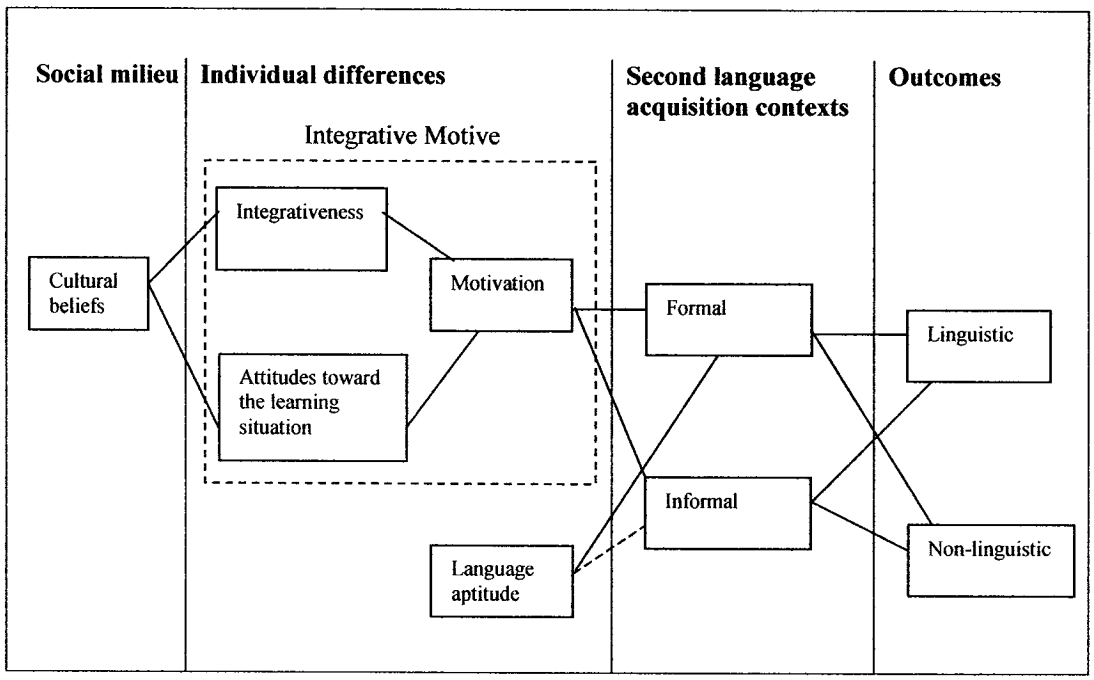


Figure 2. Gardner's Operational Formulation of his Socio-Educational model (1985, p.153).

In Gardner's operational formulation of his Socio-educational model (see Figure 2), integrative motivation (1985[2]) is composed of three factors: integrativeness, attitude toward the learning situation and motivation. He first two factors, integrativeness and

[2] Gardner (2000) elaborates on this.

attitudes towards the learning situation, are seen by Gardner as impetus for the third factor, that of motivation. Integrativeness refers to an openness on the part of the language learner to identify with the language community. Scales to measure integrativeness would assess attitude towards the target language group, integrative orientation and interest in foreign languages. Attitude toward the learning situation concerns the reaction of the learner to how the language is taught, and the scales which measure this attitude are evaluations of the teacher and the course. Motivation is behaviour which is goal-directed. Scales assessing motivational intensity, a desire to learn the TL, and attitudes toward learning the TL would measure motivation. Of the three factors in his model, motivation is most directly linked to language success. The other two feed into it. In other words, if Gardner had used arrows in his model, they would have pointed from left to right. For example, a learner who has a high integrative orientation, yet whose attitude toward the learning situation is poor, will not have as high a motivation for learning the second language as one who views the learning situation more positively, and may not successfully learn the TL. Gardner demonstrates the validity of his model with the use of a causal modelling procedure known as Linear Structural Relations (LISREL) (1985). This correlation matrix describes the degree of linear relationship that exists between all of the measured variables possible.

In the above model, Gardner has integrativeness as one of three factors of the integrative motive, one of two independent individual differences which affect second language acquisition. He has, at this point, begun to shift away from a strictly goal-oriented approach to motivation, with his addition of the attitude towards the learning situation factor. Gardner (1988), further clarifies his use of integrative motive in his

1985 model when he argues that "the concept of integrative motive ... involves a complex of attitudes toward the other language group and other groups in general, integrative orientations to language study, evaluative reactions toward the language learning context and various indices of motivation to learn the language" (p. 138) and cannot simply be reduced to an orientation alone, as he suggests some researchers tend to do when interpreting his model. From his discussion, it can be understood that he believes an integrative orientation (integrativeness) is not necessarily the only factor involved in successfully learning a second language.

Deci and Ryan's (1985) *Self-Determination Theory* (SDT) has also been extremely influential in the field of SLA and motivation. Their theory holds that intrinsic motivation (IM) and extrinsic motivation (EM) are the opposing ends of a continuum of self-determination. Intrinsic motivation is the type that causes one to perform an activity simply for the pleasure of doing it. This type of orientation is thought to be more self-determined (and thus more successful for language learning purposes) than extrinsic motivation, which causes one to perform the activity to arrive at a certain instrumental goal. In their theory, intrinsic motivation derives from an innate need for self-determinism. Students will veer towards interesting activities which are challenging, but which they feel can provide them with success, and therefore confidence in their abilities. Deci and Ryan identified three types of EM on a continuum of self-determination: *external* (reward or punishment), *introjected* (internalized pressure, such as guilt) and *indentified regulation* (the view of something as personally worthwhile). This third is considered to be the most self-determined of

the three. In addition, they proposed the construct of *amotivation*, in which the learner cannot see any relationship between the action being performed and the consequence.

2.2.2 Research shift in the 1990s

In the early 1990's, Crookes and Schmidt called for changes to the way motivation was researched (1991). They discussed Gardner's (1988) clarifications of the integrative motive in his socio-educational model. They also stated that other researchers had reported findings which showed that a learner's age, individual characteristics, such as language aptitude, and the context in which the language learning occurs (SL versus FL) all play roles in engendering the motivation required to learn a language. They suggested that these developments called into question the popularly held belief of the time that the integrative orientation was superior to other orientations in motivating the learner to successfully learn a language (Au, 1988; Oller, 1981; Oyama, 1978; Purcell & Suter, 1980 in Crookes & Schmidt, 1991). Finally, Crookes and Schmidt proposed that a more education-centered approach, one that explored possible ways of looking at motivation in the classroom setting as opposed to in the social setting, was needed.

Skehan (1991) argued that the motivation research stemming from Gardner and Lambert's original studies on the integrative orientation (1959, 1972) concentrated heavily on how goals influenced motivation. He proposed a general model in which he suggests that while some influences on motivation are inherently inside the individual, such as goals, expectations, and success, others come from outside the individual, such as the effects of materials and teaching, constraints, and rewards. He further sub-divided these influences into those that are found within the learning context, namely

materials, teaching, expectations, and success, and those that are the results of learning, namely constraints, rewards, and goals (see Figure 3). Over the past decade, in part due to the fact that Skehan, and others like Crookes and Schmidt, saw the need for a broader view of motivation, there has been a great deal of research on various potential influences on motivation, including those which Skehan had considered.

	Within the Learning Context	**The Results of Learning**
Outside the Individual	Materials Teaching	Constraints Rewards
Inside the Individual	Expectations Success	Goals

Figure 3. Skehan's Influences on Motivation (1991, p.281).

From outside the field of SLA, there were at around this time several new motivational theories which helped fuel the directional shift which occurred in language learning research. Expectancy-Value frameworks, from the field of psychology, suggested that motivation was determined by the individual's expectancy of success, along with the value that they placed on that success. For example, according to *Self-efficacy Theory* (Bandura, 1993), people with low self-efficacy tend to see tasks that are more challenging or difficult as threatening, whereas those with high self-efficacy are more able to overcome personal doubts of success. Bandura identified 4 factors which affect an individual's evaluation of self, and subsequent self-efficacy. They are past performance in the area (self-evaluation of ability), vicarious

learning (in which they observe others), encouragement (feedback), and emotional reaction (e.g. anxiety). Low self-efficacy will often lead to failure and low satisfaction, whereas high self-efficacy will often lead to success and a higher rate of satisfaction. However, satisfaction will also be affected by how much worth or value is placed on the achieved task. Bandura also defined a collective efficacy as "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainment" (1997)

In another example, *Attribution Theory* (Weiner, 1992), an individual looks to his or her past in a need to determine the appropriate level of expectancy of success he or she should attribute. If success on a task is attributed to a stable condition, such as ability, rather than to an unstable condition, such as good luck, then the expectation for success will rise the next time the same task is confronted. Effort is lower on the list, seen as more controllable by the learner. In this case, if a failure is attributed to lack of effort, rather than to lack of ability, it will be easier to continue to have a good expectation of success the next time. In Eccles and Wigfield's (1995) Expectancy-Value model, value can be divided into three categories: Attainment value, or the importance one gives to doing well on a specific task; Intrinsic value, which can be seen in terms of the level of interest and enjoyment one feels in doing a task; and the Extrinsic utility value, which is an evaluation of how well the task meshes with one's goals. Thus, value can also be expressed by the terms interest and relevance (in Schneider, 2001).

Within the field of SLA, according to Dörnyei (2001b), there is no actual expectancy-value model; however, he enumerates ways in which certain of the aspects

have been incorporated into L2 research. For instance, Attribution theory was examined by Williams and Burden (1999). In their 1999 study, Williams and Burden examined the way students develop their perceptions of themselves as language learners. They looked specifically at students' development of attributions for their perceived successes and failures. Thirty-six French language learners in three English schools were randomly selected to participate in a short, recorded interview of four questions. Tapes were transcribed and responses were listed in what they term a grounded manner: the students' original descriptive phrases were set out without previously determining categories for them. Then the two researchers searched for natural groupings within the data and worked for consensus on each.

The researchers concluded that different age groups have different ranges of attributions for successes and failures. For instance, older children (over 12) attributed success mainly to ability and the amount of work they did, whereas younger children tended to attribute success less to ability per se, and more to the effort of listening and paying attention. Dörnyei (2001b) points out that what is interesting here is that the attributions mentioned correspond well to those from the motivational psychology model of expectancy-value theory. Other aspects of expectancy-value theory have also been investigated in the L2, such as self-efficacy, which has been examined in terms of linguistic self-confidence (Clément, 1980) and intrinsic versus extrinsic utility value, of which certain aspects can be seen in Gardner's 1985 social-educational model and theory of motivation.

In the 1990s, other researchers were exploring alternative orientations to Gardner's integrative orientation (integrativeness). Dörnyei (1990) hypothesised that an

instrumental orientation might be of more importance to foreign language learners than an integrative orientation in that they would have no direct contact with the target group and thus would not have developed attitudes towards it. He found, in line with Clément & Kruidenier (1983), that instrumental goals were key for foreign language (FL) learners, but only up until an intermediate level.

Clément, Dörnyei, and Noels (1994) applied Gardner's (1985) model to a foreign language (FL) learning context. They looked for orientations (influences) which might be relevant in this context and examined the role and nature of affective traits, self-confidence, and classroom dynamics. They asked 301 EFL learners in the Hungarian school system to respond to a questionnaire which assessed orientations, attitudes, motivation, and anxiety. Teachers were also requested to complete a questionnaire in which they evaluated their students' behaviours and proficiency, along with a rating of the groups' cohesiveness and cooperativeness. They analysed the data using correlational and factor analysis methods.

The researchers suggest that their results provide empirical support for a tri-component motivational complex of foreign language behaviour and competence, which is comprised of integrative motivation, linguistic self-confidence, and appraisal of the classroom environment. Factor analysis identified five factors which could define motivational orientations in this particular FL context, accounting for 41.5% of the variation. These were: xenophillic (a friendship orientation), identification (an identification with an English cultural group), sociocultural (an interest in English culture), instrumental-knowledge (a pragmatic orientation based on the desire to learn English to improve job prospects, or simply to become more educated), and English

media (a desire to access English media). Together these form the basis of their integrative motivation component. Another finding is that learners who are not anxious when using English tend to rate their level of ability positively and report satisfaction with their level of English and regular contact with speakers of English. This can also be called linguistic self-confidence. Additionally, they are very enthusiastic about evidence which favours methods which enhance group dynamics and group cohesion in the classroom.

Like Skehan, Crookes and Schmidt (1991) made suggestions for future research (at the classroom and curriculum level). They posited four classroom-specific motivational forces, based on Keller's (1983) education-oriented theory of motivation which he developed for use in instructional design, and discussed how teachers can use their conceptual model to develop and sustain motivation in their students. The first motivational force is interest, which is characterised by innate interest which arouses and sustains curiosity about one's surroundings. This is similar to intrinsic motivation as defined by Deci & Ryan (1985).

Behind the second classroom-specific motivational force, relevance, is the idea that the learner must see that his or her needs are being met in order for motivation to be sustained. At the micro-level, that of the learning situation, it involves the student's perception of whether or not the values and goals of the course and course content reflect or match his or her values and achievement goals for the learning of the L2. Expectancy, the third force, also resembles expectancy-value theory, with elements of expectations for success and attribution theory. Those who believe they will succeed, along with those who perceive themselves to be in control of their learning (locus of

control), will be more motivated (Bandura, 1982 in 1997; Deci & Ryan, 1975, 1985). Expectancy at this micro-level is determined when students look at the level of difficulty and familiarity of the task, the amount of effort it will require, and the amount of help which will be available to them. The use of group work, reflecting more collaborative, rather than competitive goals, may help teachers to create this expectancy.

Finally, in Crookes and Schmidt's (1991) fourth motivational force, outcomes, the learner's motivation stems from a reliance on reward or punishment. This is similar to extrinsic motivation as defined by Deci & Ryan (1985). Dörnyei (1994) suggests that this component, which he entitled *satisfaction*, combines elements of, on the one hand, such intrinsic rewards as pride in one's accomplishment, and, on the other hand, such extrinsic rewards as good marks. Research has shown that an extrinsic focus may work temporarily, but it may also negatively affect continuing motivation by overruling or undermining more natural, intrinsic goals (Deci & Ryan, 1985; Maehr & Archer, 1987). Thus, a teacher should not emphasize, and may even need to discourage, a student's concern with course marks.

2.2.3 Recent research

Many researchers have followed Crookes and Schmidt's suggested directions. In the late 1980's and the 1990's, the integrative / instrumental paradigm was altered substantially as researchers began to look at cognitive and situation-specific dimensions at the micro level, as opposed to looking at the learner's more general disposition at the macro level (Dörnyei, 2001a, p. 44). Also, during this time, researchers began to see

motivation as being partly made up of dispositional traits, which actually influence state, or transitory motivation (Tremblay, Goldberg, & Gardner, 1995). Trait motivation is the term for stable, fixed attributes of motivation, whereas state motivation is the term for motivation which is fluid in nature, and responsive to the context of the learning situation.

Dörnyei (1994) built on Crookes and Schmidt's suggestion and expanded on the tripartite model of Clément, Dörnyei & Noels (1994) and his own previous research (Dörnyei, 1990) with a broader conceptualisation encompassing the target language, the language learner, and the language-learning situation. In Dörnyei's conceptual framework of L2 motivation, there are three distinct levels of motivation: language level, learner level, and language-learning situation level. He theorizes that each of these levels of motivation "exerts their influence independently and has sufficient power to nullify the others" (Dörnyei, 2001b, p.113) (see Figure 4).

In the language level, there are components, according to Dörnyei (1994), which are related to culture and community, as well as to the benefits to be gained from learning a second language. Thus, encompassed here are integrative and instrumental subsystems, which he states take into account Gardner's (1985) revised integrative orientation, as well as Clément et al.'s (1994) five FL integrative orientations, among others. The learner level categorizes traits which the learner may bring to the learning situation. These include the need for achievement, language use anxiety, perceived L2 competence, causal attributions, and self-efficacy.

At the language-learning situation level, Dörnyei posits that there are course-specific motivational components, teacher-specific motivational components, and

group-specific motivational components which are related to the course syllabus, materials, method, and tasks. The course-specific motivational components, which are of particular interest to this thesis, are the motives related to the syllabus, the teaching method, the teaching materials and the learning tasks.

Language Level	Integrative Motivational Subsystem Instrumental Motivational Subsystem
Learner Level	Need for Achievement Self-Confidence • Language Use Anxiety • Perceived L2 Competence • Causal Attributions • Self-Efficacy
Learning Situation Level	
Course-Specific Motivational Components	Interest Relevance Expectancy Satisfaction
Teacher-Specific Motivational Components	Affiliative Drive Authority Type Direct Socialization of Motivation • Modelling • Task Presentation • Feedback
Group-Specific Motivational Components	Goal-Orientedness Norm & Reward System Group Cohesion Classroom Goal Structure

Figure 4. Dörnyei's Components of Foreign Language Learning Motivation (1994, p.280).

These course-specific motives consist of four motivational components: interest, relevance, expectancy, and satisfaction. They correspond to interest in the

course, perceived relevance of the course to the individual's needs, expectancy of success, and the satisfaction the individual has in the outcome. According to Dörnyei's model, these components are the most useful in describing motives specific to a course. They are by nature more influenced by experience or the environment and are thus sometimes considered to be related to state motivation, rather than trait motivation. These state motivations are based on Crookes and Schmidt (1991) and Keller (1983).

Dörnyei (2002b) states that analysing motivation in FL/SL learning through tasks is a logical next step in the situation-specific, micro approach (p. 138). In a data-based study on oral task engagement, Dörnyei and Kormos (2000) looked at the effect of certain affective (motivational) and social variables on foreign language learners' oral task engagement. The participants were 44 Hungarian students of English as an FL. Students were asked to work in pairs to rank order a list of items in an imaginary scenario. Through an examination of speech size and number of turns, they determined the quality of the learner engagement. Learners also completed a self-report questionnaire which assessed attitude and motivation and was based on Clément, Dörnyei, and Noels (1994). Finally, correlations were computed between the learners' task attitudes (based on their levels of engagement) and the various attitudinal and motivational variables. The oral argumentative task was taped and transcribed. Then, the number of words and turns were tabulated. They determined that if learners hold positive attitudes to a task, then more global measures of motivations, such as social status and need for achievement, can also have an effect on their behaviour. On the other hand, if learners hold negative attitudes to the task, then behaviour is "random" (p.291). In other words, they may fail to take the task seriously. They suggest that this

shows the importance of the quality of the task and conclude that task-attitudes function like a Krashen-type filter. If down, then the learner's performance, they state, is "regular", and if up, then the learner's actions become "somewhat random" (p. 296). They found that generalized, course-specific, and task-specific motives form "three distinct layers" of the learner's motivational make-up. They also determined that an important consideration is that pairs and groups may *co-construct* task motivation (Dörnyei, 2001a, p.48).

In a follow-up study, Dörnyei (2002b) used the same data to investigate individual difference and language variables among dyads. He looked at the correlation between the interlocutors' motivational variables and the speakers' language output measures. His findings, albeit based on a small sample size, support his hypothesis that motivation correlates more closely with concrete learning behavioural measures than with more global achievement measures. He suggests that this lends credence to the idea of adopting a task-based framework for motivational research. In addition, they provide evidence that motivation is never static, but rather constantly increasing or decreasing depending on such factors as the social situation (influences of the group) and the learner's subsequent appraisals and actions. Dörnyei suggests that when a learner performs a task, complex interferences are created between the various trait (learner and language level) and state (learning situation level) motivations.

2.2.4 The EFL nature of ESL in Québec

The motivation to learn a language is generally studied in either a second language (SL) or a foreign language (FL) environment, and the results are not usually

generalized to the other setting. However, Masgoret and Gardner (2003), in a meta-analysis of Gardner's and associates' studies of his model, state that the language learning environment (FL versus SL) has little effect on correlations of achievement with the factors of attitude, motivation and orientations.

Oxford (1996) defines foreign language (FL) learning as "that which occurs when the language is not commonly used in the community and there is little opportunity to experience the language outside of class ...whereas second language (SL) learning occurs... in contexts in which the language is readily available in the community and students have many opportunities to experience it" (in Masgoret & Gardner, 2003, p. 178). Dörnyei (1990), on the other hand, feels that a distinguishing feature of SL acquisition is the socio-political relevance of the language in the cultural milieu: "We believe that there is a basic difference between learning French in any part of Canada and learning, for example, Swedish in the same context" (p. 70). Yet, he also defines FL learning as that which takes place in a formal, school setting where contact with the TL community is restricted, and no regular interaction takes place. Discussion of FL versus SL suggests that it depends on whether "there were large pockets of French [or other] speakers in the immediate environment and the language was promoted in that area" (Masgoret & Gardner, 2003, p.180). Finally, Noels, et al. (2003) state that the integrative orientation, as such, is better suited to a multicultural environment where the language learner is of the dominant group.

Clément and Kruidenier (1983) argue that dominance/non-dominance issues of relations between ethnic groups influence the orientations that each of these groups will exhibit when learning the other group's language. "In a Canadian setting," they state,

"Anglophones and Francophones could be expected to differ markedly in terms of their orientations to learning the language of the other group" (p. 277). In their study of 871 grade 11 students from eight groups representing all multicultural and unicultural settings, language backgrounds and target languages (TLs) in Canada, they found that the integrative orientation exists only in multicultural settings, among members of a clearly dominant group. Their questionnaire contained 37 Likert-style orientation questions. Results showed that there were different orientations associated with each of the eight groups. For example, Anglophones learning French in a multicultural milieu exhibited orientations towards friendship/travel, instrumental, influence, prestige, knowledge/identification, and knowledge/instrumental whereas Francophones learning English in a multicultural milieu evidenced orientations towards travel/friendship, understanding, social/cultural, indentification/travel, career/instrumental, and school instrumental, and further, the orientations associated with Francophones learning English in a unicultural setting were knowledge, friendship, instrumental, travel, prestige, and distant interest. Four general orientations seemed to hold true across all settings and to replace the integrative orientation. These are: instrumental, travel, knowledge, and friendship. Clément and Kruidenier recommend that these be used as independent orientations in future studies.

With this in mind, it stands to reason that, in many ways, the L2 learning experience of Quebec CEGEP students, who are technically studying ESL in an L2 context, is, by definition, more FL than SL in nature. Many Francophones in Quebec may go through their entire school career without ever having to communicate with an Anglophone, even in parts of Montreal. Many of these learners believe that they will

not be asked to use English in their careers, or in their daily lives. A discussion of whether or not it is important to learn English often turns into a political debate. Their main exposure to the Anglophone culture is through the media, and for many this exposure is limited to music lyrics and the occasional movie. For this reason, it is important not to exclude or ignore findings from EFL studies as they may indeed prove to be a good fit for these Quebec "ESL" students.

If, as the recent literature reviewed above suggests, motivation can be altered at the micro level in the language learning situation, then, an analyses of motivation in the classroom in terms of the course-specific motivational components of Dörnyei's (1994) Tripartite Framework of Second Language Motivation should prove to be extremely informative and useful. In addition, if, as we now know, motivation can have an impact on learning, then it is important to examine ways of improving motivation in the language classroom. A possibly motivating classroom experience, which also offers a solution to the problem of diverse fields of study in CEGEP B-Block courses in that it involves group work, is participating in a collaborative on-line project. Sanaoui and Lapkin (1992) found that on-line exchanges with others engendered enthusiasm and motivation. Soh and Soon (1991) state anecdotally that "the very presence of a micro-computer in the classroom can have a great motivating effect" (p.292) and Kern (1995) found computer interaction to be "a novel context for social use of language" (p.470), as did other researchers (Chun, 1994; Warschauer, 1996a). The option of integrating computers into the course plan is explored in the next section, which will examine the methodology of Computer-assisted Language Learning.

2.3 Computer-Assisted Language Learning (CALL)

2.3.1 Behaviourist CALL

CALL has evolved a great deal since its early beginnings as a methodology associated primarily with the language learning theory of behaviourism, with its drill and practice programmed learning experiments. Yet, from its early beginnings we see hints of later more interactive technology. For instance, PLATO (Programmed Logic for Automated Teaching Operations), developed originally in the early1960s for translation, was later used in both L1 and L2 classroom learning. Interestingly, even predating the Internet as it did, it contained note files, which allowed for some written communication between a teacher or tutor and a student or between a learner and other learners. It also had a student work tracking system and bulletin board style announcements (Delcloque, 2000).

2.3.2 Communicative CALL

Communicative CALL, which was developed in the 1970s and 1980s based on the communicative approach to second language teaching, dramatically altered the way CALL was perceived, as well as the types of activities language teachers found themselves using computers for. Thus word-processing activities, computer games, and the use of microworlds began to replace the earlier computer exercises on grammar, reading and writing which were, and still are to some extent, the *raison d'être* of most school language laboratories. The first multi-media project, called Time-shared Interactive Computer-controlled Education Television (TICCIT) was developed by the MITRE Corporation and run by the United States National Science Foundation as an

experiment in two community colleges, Northern Virginia Community College and Phoenix College, in the 1970s and used to deliver educational material for courses in algebra and English grammar and spelling. Then, in the 1980s, when computers began to be made available to the masses, more teachers began to experiment with computer technology in the classroom. In 1987, the Hypercard authoring system was created and marketed for the MacIntosh. It had a huge impact on the way computers could be used in the classroom because it had a low-tech interface, so any teachers who wished could begin to create their own materials. Also, companies such as Hyperglot (Softkey) produced a large number of software programs using Hypercard (Delcloque, 2000).

2.3.3 Communicative CALL and motivation

Although the motivational aspects of learning with computers are well-documented in the literature (Chapelle & Jamieson, 1986; Warschauer, 1996c), research in this area generally involves academic subjects other than second language learning and is called computer-assisted instruction (CAI). Much of this research was done in the eighties and early nineties and is now out of date (Murray, 1997). The technologies have evolved so rapidly that one cannot simply assume that findings from those early studies are still applicable today. Moreover, language learning is different from learning other subjects and may require different strategies or different types of motivation. Nonetheless, Warschauer (1996c) states that studies of this time most frequently cited the following motivating aspects of CAI: the novelty of the new medium, the individualized nature of CAI, the opportunities for learner control, and the opportunities for rapid frequent, non-judgemental feedback (paragraph 5).

Many of the language-related studies also tend not to be recent. These older studies generally examine motivation and learning from a behaviourist or communicative CALL perspective, rather than from an interactive CALL approach (see Section 2.3.4). However, studies such as Chapelle and Jamieson's (1986) still have much to offer. In this study, twenty-eight Spanish-speaking and 20 Arabic-speaking students, from 18 to 40 years of age, agreed to participate in their University of Illinois study on the effectiveness of using CALL in the ESL classroom. They used ESL PLATO courseware as their CALL material. These are behaviourist drill and practice lessons with repetitive instructions and lessons on grammar, reading comprehension, vocabulary, and listening (dictation and spelling). The variables investigated included affective and cognitive differences, such as field independence/field dependence, ambiguity tolerance, motivational intensity, English-class anxiety, attitude toward CALL, and time spent using CALL. The theory of field independence versus field dependence was that a field independent person would look to solve a problem quite analytically, whereas a field dependent person would solve the problem in a more global way (Chapelle & Jamieson, 1986, p.32).

Their results showed a significant negative correlation between field independence and both time and attitude, which suggests that highly field independent people do not like to work with CALL. They also found a significant positive correlation between motivational intensity and both time spent on CALL and attitude to CALL. Chapelle and Jamieson suggest that this means there is "a strong relationship between what students said they liked and what they actually did" (p.37). In another study, Adrianson and Helmquist (1993) noted that inexperienced learners were not

productive on the computer, while more experienced learners tended to be more so. These studies are of interest as they point to a type of student who likes to use one particular CALL activity and who will do well using it, but suggests that this is not necessarily true of all students, nor indeed for all types of CALL activities. Chapelle and Jamieson (1986) state clearly in their conclusion that

> CALL effectiveness cannot be looked at as if it is one form of instruction. Instead, effectiveness must be analysed in terms of the effects of defined types of lessons on students with particular cognitive/affective characteristics and needs. To do this, it is necessary to access the characteristics of students and analyze the approach taken in a particular lesson or series (p.42).

2.3.4 Interactive CALL

In 1990, the World Wide Web (WWW) was created and the Internet became a household word. Today, due to the availability of the Internet in schools and the ease of the WWW interface, students in the L2 classroom interactively use authentic language to fulfil the goals of authentic tasks. The use of the Internet for authentic interaction between learners is called interactive CALL. This new, interactive CALL does not reject the old communicative CALL, but rather, as Warschauer states, "the old is subsumed within the new" (1996b, p.3). Teachers and language researchers alike have experimented with the different tools that the WWW has to offer, from creating their own teaching web-sites to involving students in webquests, Internet research, and on-line communication. Warschauer (1996b) suggests that this new interactive CALL has

become integrative (p.3). CALL users, he states, show a desire to integrate into the target language community (the on-line community). This new CALL is referred to as computer-mediated communication.

2.3.5 Computer-mediated communication

The term computer-mediated communication (CMC) has been used in different fields to mean many different things. It originated outside of the fields of language and education with Hiltz and Turoff's (1978 in Hiltz & Turoff, 1993) classic business study which described computer conferencing. They suggested that computer conferencing provides members with anonymity (which is a form of self-protection and helps avoid embarrassment), increased access to information, and the ability to easily express their opinions by vote. They further stated that group members also receive services from CMC that face-to-face groups do not get, such as threading (intermixing of messages according to topic and when they were written) and storage retrieval of conversations. Another advantage is that CMC can help make face-to-face meetings more productive in that they can help to establish common ground beforehand (p.137).

In terms of motivation, Hiltz and Turoff believe that it is important for group experiences to be structured. For instance, participants should take the time to get to know one another through introductions before going on to any other type of group work. They present four phases of group work: 1. creativity (the pooling or creation of a knowledge base which may involve brainstorming); 2. evaluation and consensus exploration (conflict resolution, possibly involving voting); 3. relationship judgements and model formulation (working through each idea and analysing its relative value to

the model); and 4. comprehension and decision (working to come to an understanding of the model, possibly through games) (1993, p.293-306).

Hiltz and Turoff suggest that there are several reasons why conferences sometimes fail. They are a lack of strong or adequate leadership; a lack of convenient access to a computer; a lack of a need or desire to communicate; a lack of adequate training materials; and a lack of a "critical mass" within a group (p.124). Their critical mass hypothesis involves the optimal number for an online group, which they place at 8-12 members from at least three geographical locations. The believe that below this number not enough messages are generated to hold participants' interest.

Many researchers have quoted Hiltz and Turoff's study and generalized their findings across CMC modalities. Yet, in the spirit of Chapelle and Jamieson's words of wisdom quoted above, CMC cannot be discussed as if it were simply one type of CALL modality. CMC modalities are a sub-grouping of CALL tools which have in common the fact that they all involve "direct human-to-human communication rather than human-to-machine" (Warschauer, 1996c, paragraph 10). Apart from this fact there are major differences.

CMC can, and often is, used to refer generally "to both task-related and interpersonal communication conducted by computer" (Ferris, 1997, p.1). For instance, it has been used to refer to Internet Relay Chat (IRC), chat rooms, computer-conferencing, local area networks, bulletin boards, electronic mail (email), and email-based discussion lists. Many use it so broadly as to mean any and "all computer uses... (including) such diverse applications as statistical analysis programs, remote-sensing systems, and financial modelling programs (which) all fit within the concept of human

communication" (Santoro, 1995, p.11 in Ferris, 1997, p.1). In general, CMC simply means that the communication is mediated by the computer (December, 1997). In other words you communicate through a medium or through tools which can alter or arrange your message in ways that are different than what you could do on your own (without the medium).

Even within the field of language learning, there is often controversy in the definition of CMC. Some use it quite narrowly. For instance, Warschauer uses it to refer to people sending messages to individuals or groups (1996a,b,c, 1997), but Murray (2000) suggests that it should include only text-based modes, including new applications like text-messaging, yet excluding oral modalities, such as teleconferencing. Still others may wish to include the oral modalities.

Murray (1997) suggests that CMC has come to mean different things to different researchers, and this is no less true within the field of SLA. This is probably because each of them is using or studying a different CMC mode, such as chat or bulletin boards. In this way, they are trying to narrow the definition of the broader term to describe their modality accurately. Murray (1997) cautions that it is not appropriate to assume that findings from research conducted on computer-conferencing can be applied to other modes of CMC, such as e-mail or chat, for example. December's definition of CMC as "a process of human communication via computers, involving people, situated in particular contexts, engaging in processes to shape media for a variety of purposes"(paragraph 3) seems particularly apt for CMC in language learning. The reason is that it takes into account that what makes CMC useful and appealing in language studies is that it "operates within human contexts" (December, 1997,

paragraph 4). As December states, "ultimately, the definition of an activity as computer-mediated relies for its validity on its value for shedding meaning on the communication act" (paragraph 18). In this study, CMC will be considered tools for people to communicate with others individually or in groups.

CMC can be further described along two different axes: time and place (Nunamaker, 1991; Rodden, 1991; Johansen, 1992 in Benbunan-Fich & Hiltz, 1999). Accordingly, interaction can occur at the same time (synchronous) or at different times (asynchronous). Meetings can occur in the same place (proximate) or in different places (disperse) (see Figure 5).

		Time	
		Same	**Different**
Place	**Same**	*Synchronous/Proximate* Technology-enhanced classrooms (computer-conferencing, local area networks (LANs))	*Asynchronous/Proximate* Shared physical workspace: e.g. (Video taped lectures in a single location or a networked computer lab)
	Different	*Synchronous/Disperse* Networked classrooms (chat, computer-conferencing, etc.)	*Asynchronous/Disperse* Virtual Classrooms in asynchronous learning networks (ALN) environments (e-mail, bulletin boards, etc.) Web Telecourse

Figure 5: Typology of Dispersion in CMC. Adapted from Johansen (1992) and Benbunan-Fich and Hiltz (1999).

Ortega (1997) argues that CMC tools which are specifically used for computer-assisted classroom discussion (CACD) are particularly promising for SLA three reasons:

1) They lead to meaningful use of the target language and help teachers and students to regard language as a medium of communication to be practiced and used rather than as an object to simply be studied.

2) They become a communicative CALL activity, but can also encourage "a task- and interaction-driven approach" (p.83) to learning and teaching an L2.

3) They provide better opportunities for language development because students are motivated to "stretch their linguistic resources in order to meet the demands of real communication in a social context" (p.83).

Warschauer (1997, p.471) proposes that CMC modalities have five inherent features which make them unique from other media.

1) Text-based and computer-mediated

Warschauer states that "it is precisely the intersection between interaction and reflection which is of critical importance in education" (1997, p.474). He claims that the fact that the interaction in CMC is text-based (in writing) allows for a more reflective communication, and the fact that it is conducted by computer network (over the Internet) allows the communication to be fast and easy. He suggests that on-line chats fulfil the role of the "thinking devices" which Lotman (1988) believes are crucial for "collaborative construction of knowledge" (in Warschauer, 1997, p.474).

2) Many-to-many communication

Warschauer also states that being able to use CMC in the classroom allows for "many-to-many" (1997, p.475) communication, which means that each member of the group is able to initiate conversation with each of the other members, or indeed all of them at once. This means that an authentic audience is available to each student. It is also partially responsible for the fact that the social dynamics of CMC are different from that of the face-to-face situation.

3) Time- and place-independent

In a similar vein to that of Johansen's "Typology of Dispersion" mentioned above, Warschauer (1997) calls this unique feature of CMC "time- and place-independent" (p.471). He states that this "extends the potential of on-line collaboration" (p.471) in that it

a) allows for more in depth analysis and critical reflection, since e-mail can be answered more deliberately than synchronous messages, and

b) allows students to initiate communication with each other or with the teacher outside the classroom. (p.470)

4) Long distance

CMC also allows for interaction over great distances between people of varied cultures. Many modern second language curricula now acknowledge the importance of cross-cultural awareness in L2 teaching. The long distance aspect of CMC means that suddenly students have access to 'experts' and

native speakers around the world in a way that could not even have been conceived of before the advent of the Internet.

5) Hypermedia links and student publishing

This feature of CMC extends the bounds of what we normally think of as CMC to include aspects of the World Wide Web. First of all, students using other CMC tools can use the WWW to access information which can then easily be used for on-line or in-class collaborative activities (Warschauer, 1997, p.472). Secondly, the WWW can also be used interactively.

The five distinguishing features discussed above, which allow for the possibility of "experiential and goal-oriented" (Warschauer, 1997) activities, make CMC tools valuable and exciting for both teachers and researchers alike. Warschauer's second inherent feature, especially, that being able to use CMC in the classroom allows for "many-to-many" (p.475) communication, means that each member of the class is able to initiate conversation with each of the other members, or indeed all of them at once. As shown above, this is important because it means that an authentic and larger audience is available to a student than might otherwise be possible in a classroom context. He also notes that the social dynamics of CMC are different from those of the face-to-face situation, thus allowing shy or minority students a more equal footing. His third feature, which postulates that CMC usage is "time-and place-independent", makes it possible for group members to work together on-line at their own individual times of choosing, even if they are unable to find mutually convenient times to meet and work together in person.

Aspects of three theoretical views of language and the nature of language proficiency, the functional view, the structural view, and the interactional view, can be seen in CALL. However, perhaps the one to hold the most sway in CMC as it pertains to language learning is that of the interactional view, the view that "sees language as a vehicle for the realisation of interpersonal relations and for the performance of social transactions between individuals" (Richards & Rodgers, 1986, p.17). Egbert and Hanson-Smith, in their recent book CALL Environments, begin their discussion of interaction by reminding us of Vygotsky's belief that "all human learning is mediated through interaction with others" (1999, p.17). This idea is central to CMC and language learning. Teachers who choose to use CMC, often do so because they wish "to develop knowledge as a social rather than an individual activity, reduce social distance between students and the course instructor, promote continuous dialogues, and reduce anxiety" (Kamhi-Stein, 2000, p.430).

CMC use has led to much recent interest and debate in the field of second language teaching. Many teachers are already using this new technology enthusiastically in their classrooms, and there is much anecdotal discussion about the purported benefits of CMC. Ortega (1997) enumerates the following: CMC modes, which are used for CACD, have an equalizing effect on participation; increase learner productivity; allow for a wide variety of interaction types; and produce a high amount of writing. In addition, learners contribute at their own pace; participate more and with a higher number of turns; and have time to plan and edit, thus engaging in helpful L2 strategies. Finally, electronic language is more complex than face-to face, yet less threatening and inhibiting than oral interaction (p.83-84).

Early L1 and L2 users of CMC experimented with computer conferencing to enhance collaborative writing assignments and promote general language development in class (Batson, 1988; DiMatteo, 1990; Susser, 1993). Batson, for example, used computer conferencing for large group discussions among hearing impaired students. Researchers now study the use of such CMC modes as bulletin boards and e-mail as media "to facilitate communication and sharing" (Perrone, Repenning, Spencer, & Ambach, 1996, in Egbert & Hanson-Smith, 1999, p.26).

Other studies look at student attitude or involvement. In a quasi-experimental study which examined student participation in whole-class, face-to-face discussions and in bulletin board discussions in a TESOL teacher preparation course, Kamhi-Stein (2000) noted both positive attitudes to using CMC and increased involvement. Other researchers have also found that CMC use improves student involvement (Kern 1995; Warschauer, 1996).

In addition, some studies suggest that CMC seems to result in more equal interaction between minorities and majorities (Kelm, 1992; Kern, 1995; Lamy & Goodfellow, 1999; Ortega, 1997; Warschauer, 1996a, 1998), and genders (McGuire, Keisler & Siegel, 1987) than are found in the more usual face-to-face atmosphere of the classroom (in Warschauer, 1996a). Yet, Trillo (1997) states that "when we interact with one another, whether face-to-face or through mediating technology, we bring with us our unspoken guidelines for behavior..." (in Warschauer, 1996c, paragraph 4), which suggests that it is unlikely that CMC activities are, or ever will be, completely free of race and gender disparity, and Sengupta (2001) found that this "democratization" did not play a significant role in student's on-line participation patterns (paragraph 50).

2.3.6 Computer-mediated communication and learning

Studies in computers from other fields give us insight into learning. For instance, Alavi (1999) compared MBA students in a Management Information Systems course, half of whom were using computers for support and half of whom were working face-to-face. Those using the computers reported their level of skill development as higher, as was their self-reported learning and their evaluation of the experience in the classroom, than those who did not use computers. Also, their final test scores were significantly higher (in Benbunan-Fich & Hiltz, 1999).

Several SLA studies have shown how e-mail enhances language learning. In one such study, student use of the target language became more complex and more frequent (Chun, 1994). A study by Smith (2003) examined task-based, synchronous CMC, specifically chat, among intermediate ESL students to determine whether learners negotiate for meaning in chat when they see new vocabulary items and whether the type of task affects the amount of negotiation. Smith also wished to compare this negotiation to that found in the face-to-face communication literature. The data were taken from stored online chat conversations between 14 non-native to non-native dyads, who were intermediate-level students of intensive ESL at a Midwestern university. The tasks performed were oriented towards goals, and the participants were expected to accomplish these goals through their conversations. The second feature of the tasks was activity. The students had to be actively involved in order to complete the tasks. Smith found that indeed negotiation for meaning, which he calls "negotiated meaning" (p.39) does occur and that task type does influence the amount of negotiation which takes place although not perhaps in the same way as it does in face-to-face

negotiation. They found a higher number of negotiated turns and negotiations for lexical items in the decision-making tasks than in the jigsaw tasks, which is not in line with Pica, Kanagy, and Falodun's (1993) findings. This may have been due to the on-line context of the task, or possibly it was due instead to the high number of seeded lexical items they included in the decision-making tasks. The jigsaws did elicit more incidental negotiation, as predicted by Pica et al. (1993).

Smith's task types were taken from Pica et al.'s (1993) typology of communication task types. In this typology, the various pair and group task types are rated in terms of interactant relationships (one way or two way) and the amount of negotiation needed to perform the task and achieve the goal. They rate jigsaws and information gap activities as most effective at providing opportunities for understanding and using the L2 and receiving feedback. They rate problem solving and decision making tasks in the middle, and opinion exchanges as least effective.

In Lamy and Goodfellow's (1999) study of asynchronous computer conferencing and the role of conscious reflection in a French language course, they point to a tradition of investigation into L2 acquisition called input-processing (Van Patten, 1990, 1993 in Warschauer, 1998). Basically it is through the negotiation of meaning that the learner comprehends the input and modifies the output. According to Warschauer (1998), the asynchronous modes give more time to attend and process written language.

Lamy & Goodfellow (1999) contrast this input-processing model to the Social Interaction Model (Van Lier, 1996) which begins with a continuum of power relations from authoritarian to exploratory. At one end there is lecture talk, which is considered

to be monologic, and at the other is conversation, which is considered to be dialogic where there is equal participation and control between the various learners, as well as between the teacher and the learners. It is less teacher-centred. Van Lier (1996) calls interaction at this dialogic level contingent interaction in that it exhibits the greatest equality among the participants and presents the best likelihood of high quality learning. Although both of these models are generally used to examine face-to-face oral speech, Lamy and Goodfellow suggest that they have descriptive power for CMC written dialogue, and they further make Van Lier's contingency a factor of on-line learning, which should be expected to facilitate learning (p.45).

Lamy & Goodfellow (1999) examine data from Lexica On-line, a pilot project which involved ten students from the Open University's language centre, who were randomly selected to take part, and the use of computer conferencing as a medium. They found that the use of asynchronous CMC in an English as a foreign language (EFL) classroom promoted three degrees of interactivity:

a) *monologic* (no invitation to interaction)

b) *dialogic* (social interaction)

c) reflective (focus on features of language, language strategies, and modification of output)

Thus, they found that CMCs are flexible in nature, and depending on how they are used, they can result in a wide variety of interaction types. Lamy and Goodfellow suggest that students should be encouraged to have conversational- and reflective-type interactions, rather than simply the monologic-type. They state that these types of

interactions, especially the reflective, fulfil the conditions for language learning in terms of their value for interaction.

Electronic interaction (such as e-mail and journal writing) has been shown to resemble certain types of written and spoken language (Collot & Belmore, 1996, in Kamhi-Stein, 2000, p.429). Research has shown that these CMC modalities can also promote language, reflection on language, reading abilities, and writing abilities (Chun, 1993, in Warschauer, 1996b; Heath & Branscombe, 1995 in Egbert & Hanson-Smith, 1999; Sanaoui & Lapkin, 1992; Staton, Shuy, Peyton & Reed, 1988). Sullivan & Pratt (1996) suggested that CMC offers the student more time to think, and Sengupta (2001) points to the novel CMC habit of "lurking", that is, visiting a site, especially a BB or chat room, and quietly watching without announcing one's presence or participating actively, as a sign of time taken by students for needed reflection and orientation. Lunde (1990) described how he used email in a Japanese language course for keypalling (communicating with a penpal via e-mail). He argued that emailing can improve reading and composition skills. Gonzalez-Bueno (1998) found that e-mail dialogue journals allow for self-paced learning.

Similarly to face-to-face communication, learning with CMC tools can facilitate group work. McLeod (1992 in Murray, 2000) found that e-mail and chat facilitate group decision-making. Ruberg, Moore, and Taylor (1996) state that "CMC provides environments conducive to collaborative learning" (in Kamhi-Stein, 2000, p.447). Sanaoui and Lapkin (1992) agree, noting that it promotes collaborative learning. Sengupta (2001) writes that "the kinds of discussions that were going on about the content showed an applied, practical, and co-constructed development of knowledge"

(p.122). Salanova, Llorens, Cifre, Martinez, and Shaufeli (2003) discovered that electronic work groups working under time pressure exhibit an increase in collective anxiety if they have low collective efficacy, but conversely, if the groups have high collective efficacy, they exhibit an increased collective engagement.

2.3.7 Computer-mediated communication and motivation

Few empirical studies have examined motivation specifically within CMC (integrative CALL). Kelm (1992), observed fifteen native speakers of English learning Portuguese using the Daedalus integrated writing environment (Daedalus, Inc. 1989), with its application program called InterChange. He claimed, based on his observations, that it is motivating for students in that it supplies them with a less threatening means of communicating. Further, he suggested that computer-assisted class discussion (CACD) increases student participation, is less threatening for shy or self-conscious students, and gives students the opportunity to take their time without the pressures normally associated with conversation.

Kroonenberg (1994/5) states anecdotally that students "can come alive while creating meaningful communication via the keyboard and screen (p.24). Other researchers suggest that it facilitates work on meaningful projects (Barson, Frommer, & Schwartz, 1993; Vilmi, 1995) and can be used as a motivating tool, especially if assigned for outside of class time, or not given for grades (Lunde, 1990). CMC also promotes student-to-student interaction, as opposed to student-to-teacher interaction (Ady, 1999). Finally, Kumar and Kumar (2003), along with Kamhi-Stein (2000), claim that CMC improves attitudes to learning of inservice and preservice teachers.

In a non-language related study on learning styles, motivation, learning strategies, and achievement, Shih and Gamon (1997) found that more field-independent students took the web-based courses than did field-dependent students. The purpose of their study was to examine how students with different learning styles learned in Web-based courses, and also to establish what factors influenced their learning. They had 99 students taking zoology and biology at Iowa State University. Students were first classified as either field-dependent or field-independent on the Group Embedded Figures Test (GEFT). This contradicts Chapelle and Jamieson's (1986) finding that highly field-independent people do not like to work with CALL. However, in essence it may actually highlight the very different nature of CMC related CALL modalities and non-CMC related CALL modalities in that CMC is more interaction-based than CALL of old. Shih and Gamon administered an on-line questionnaire on motivation and learning styles and found that "the higher the student scored on motivation and a general use of learning strategies, the higher the student's overall achievement in the class" (paragraph 38).

Warschauer's study on the motivational aspects of using computers showed a positive correlation between the CMC modality of e-mail and motivation (1996c). One hundred and sixty-seven ESL and EFL students in 12 university writing courses in Taiwan, Hong Kong and the U.S. were asked to complete a 30-question survey. This study found that variables such as self-reported knowledge of computers and amount of experience in using e-mail showed positive correlations with student motivation. Students appeared to have positive attitudes towards using computers in the ESL classroom for both writing and CMC (specifically e-mail). Warschauer concludes that

this study uncovered three motivating factors which influence this positive attitude. The first is communication. Students wanted to communicate with native and non-native-speaking students alike. Another factor is an enhanced feeling of empowerment. The final factor is that students are convinced that they can learn better and faster with computers than without (p.8). He further suggests that teachers can enhance student motivation by fully integrating any computer work into the regular course work and goals (p.9).

In another study, Kaufman (1998) analyzed the discourse found in ESL student e-mail correspondence and found "that students were highly motivated to use e-mail for communication" (in Warschauer, 1996b, 3). Sanaoui and Lapkin (1992) claim that their five FSL students from Ontario who embarked on a course based on computer-conferencing long-distance with a twinned group of ESL students from Montreal found it highly motivating. Many teachers have used e-mail projects which have involved keypals in their classrooms, and there is a large body of anecdotal affirmation for the motivational value of this CMC modality (see, for example, Kroonenberg, 1994/5).

Findings from studies on student authoring (Bowman & Plaisir, 1996; Kramsch & Anderson, 1999; Kramsch, A'Ness, & Lam, 2000; Kubota, 1999; Milone, 1995; Turner & Dipinto, 1992) show that creating multimedia materials enhanced student motivation and attitude toward the learning process and the subject being learned. For example, Kramsch et al. analyzed the construction of a multimedia CD-Rom by American college-level learners of Spanish and discovered that "hyperlinking of texts on the CD-Rom made the students curious about each others' projects in a way that perhaps they would not have been with final papers" (2000, p.97). Bowman and Plaisir

(1996) further state that students enrolled in the seven-month Project TECH (Telecommunications, education, Career Enhancement) program at the Teachers College in New York City, in which they create electronic newsletter and video productions for local dissemination, had "impressive attendance records and repeatedly complete their assignments" (p.27). They suggest that this shows increased motivation, however, they were not compared with a control group.

Salanova et al. (2003) investigated the effects of chat-internet groups on collective efficacy and performance. One hundred and forty psychology students participated in a longitudinal study and were randomly assigned to the experimental chat group and the comparison face-to-face group. Half of each of these groups worked under time pressure, while the remaining two halves worked with no time pressure. Participants performed two tasks and a small fee was offered for the best performance of the two groups. Salanova et al. measured perceived collective efficacy, collective anxiety, collective engagement, and task performance. Results indicated that task performance was positively correlated with collective efficacy and negatively correlated with collective anxiety, whether or not there was time pressure. However, time pressure was particularly a problem for the performance of the on-line group when that group also shared negative collective efficacy.

2.3.8 Electronic bulletin boards

Only a few of the above studies looked at BB use directly. Most CMC studies have examined other modalities, such as computer conferencing or e-mail. The findings can only be generalized to a certain extent, although they have many features in

common. Bulletin boards are theme or topic-specific web sites which are specifically created to facilitate communication via Internet. Like e-mail, they are asynchronous and disperse, according to Johansen (1992) and Benbunan-Fich and Hiltz (1999), meaning that bulletin boards are vehicles for people to communicate with each other virtually, from different places and at different times. Like chat, email, and computer conferencing, bulletin boards allow for Warschauer's one-to-many and many-to-many modes. Yet, bulletin boards also provide the student with two additional benefits. Bulletin boards can provide a way of grouping learners simply by offering them different virtual areas for groups to "meet", interact, and post work. Additionally, they can provide tools for students to organize and display work and to some extent, also give the learners a sense of having "published". Often they are "threaded", which means that they provide an automatic and systematic way of reading past postings. With bulletin boards people might "...participate in forums for communication that begin to exhibit characteristics of community--including a shared sense of purpose, norms for behavior, and traditions" (December, 1997, p.4).

CMC bulletin board mode is a natural vehicle for an inductive approach to grammar and four skills work (although less so for listening). Most of the BB writing is not subject to direct teacher feedback or grammatical correction due in part to the sheer volume of written communication, and also to the fact that the texts are meant primarily for peers, not teachers. Instead, the teacher generally relies on the idea that through frequent writing and reading, a student's written accuracy and fluency will improve as the student induces rules of grammar from the responses s/he receives. For example, if a student writes to his or her peers on the bulletin board in response to an

assignment, and another student responds by negotiating for meaning, the first student will have to rephrase his or her thoughts or ideas more clearly and may learn communication skills, as well as new vocabulary and grammatical forms, in the process.

When working on a BB, as with the other asynchronous CMC modes, students frequently work on their own, at their own speed. Thus, it is important to take the students' needs and learning styles into account at a basic level, by offering some type of individualized instruction. Teachers and students, for instance, can share their thoughts on the BB in a way not previously possible in large class situations. Although this means the teacher often extends his or her on-task time, it can also mean a higher quality of interaction in the classroom due to better, more developed student-teacher relationships. BB tasks can be individually tailored to a certain extent to allow for different language levels, technical skills, and learning speeds. While communicating on the bulletin board, the speed at which a student writes, the level of grammatical correctness needed to be understood, as well as the actual content of their texts is negotiated between them on a one to one basis. In this way, bulletin boarding may be an excellent technique for the teacher faced with a multi-level classroom situation.

At the same time, many CMC projects are, in effect, collaborative learning projects. For example, students could form groups of four, made up of two students from each of two or three separate classes. This would enable them to work together in teams, both in real-time with their in-class partner, and by BB with their distance partners, to solve a problem, study a subject, prepare a research report, or publish a newsletter. Thus, it seems likely that students engaged in CMC activities, who are

negotiating real language exchanges by electronic bulletin board (BB) available via the Internet, would feel high levels of motivation for the task, and that this in turn would affect their overall levels of motivation for learning English.

2.4 Summary

Clearly, CMC has potential for bringing new motivation to the ESL classroom and, importantly, for solving some difficult logistical problems. This study will examine the feasibility of combining CMC, in the form of a BB available via the Internet, with field-of-study group work, in order to enable students to venture outside of the classroom and gain access to other students in their programs from their own CEGEP, and potentially from other CEGEPs in Quebec as well. This study will further seek to examine the motivational value, as well as the learning outcomes, of this BB group work in the ESL learning context.

2.5 Research Hypotheses

The following research hypotheses are designed to address the two problems outlined above. The first problem is that teachers, who are required to have a field of study component in their course plan, often place students in groups for field-of-study project work. Yet each class can potentially contain students from fifteen or more fields of study, with many students finding themselves to be the only representatives from their programs. The second problem is that many CEGEP students lack motivation for learning a second language, which can affect their ability to achieve a successful learning outcome. In addition to finding solutions to these problems, the proposed

innovation may also offer enhanced learning opportunities. These concerns motivated the following hypotheses:

1. Using a BB will provide students with sufficient partners (at least one) in their fields of study to enable them to fulfil the field-of-study group work component of the course.
2. Participants engaged in group tasks by BB virtually over the Internet will be more motivated at Dörnyei's (1994) learning situation level, in the four course-specific motivational components, than participants engaged in group tasks of a similar nature in a face-to-face situation.
3. The learning outcomes will be higher for participants engaged in group tasks by BB virtually over the Internet than for participants engaged in group tasks of a similar nature in a face-to-face situation
    a. on their final field-of-study project
    b. in the course overall.

Chapter 3: Research Design

3.1 Introduction

In designing the study, it was important to plan the course carefully in order to create a situation where optimal motivation and learning could occur. Thus, where possible, care was taken to meet the "Conditions for optimal language learning environments" (Egbert & Hanson-Smith, 1999):

1. Learners have opportunities to interact and negotiate meaning
2. Learners interact in the target language with an authentic audience
3. Learners are involved in authentic tasks
4. Learners are exposed to and encouraged to produce varied and creative language
5. Learners have enough time and feedback
6. Learners are guided to attend mindfully to the learning process
7. Learners work in an atmosphere with ideal stress/anxiety levels
8. Learner autonomy is supported. (p.4)

The assignments to be done on computer were developed with Warschauer's advice, that teachers should make every effort to integrate computer work into the regular course work and goals in order to enhance student motivation, in mind.

3.2 Design

The design was a pre-/post-questionnaire quasi-experimental study with three experimental groups and two comparison groups (see Figure 6).

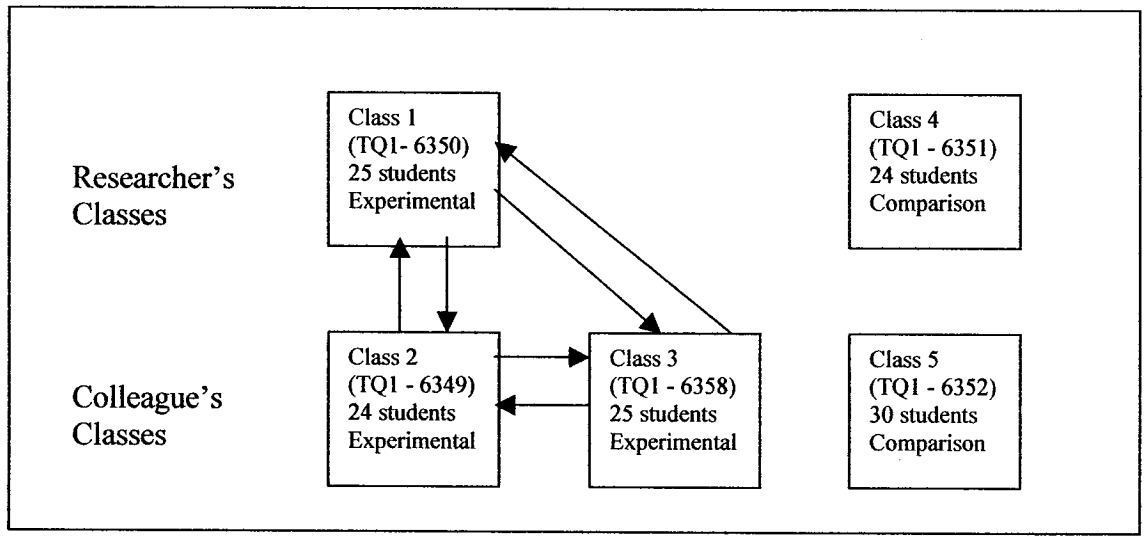


Figure 6: Three experimental groups and two comparison groups.

The design called for learners in the three experimental classes to communicate across classes using electronic bulletin boards (BB), whereas the two comparison classes would cover the same pedagogical objectives as the other three, without the BB, but with equivalent assignments. In other words, the three experimental classes worked on projects together without classroom barriers, whereas the two comparison classes worked only with students within their own classes. I taught one of the experimental classes while a colleague taught the other two experimental classes. We also taught one comparison class each. My colleague and I have worked closely in the past while teaching courses at this same level and had already developed our evaluation grids and lesson plans together, and we collaborated closely throughout the study. I am confident that our teaching methods and grading procedures were similar in nature across the five classes.

3.3 Participants

The 128 participants in this project were intermediate-level learners of English as a second language from a French CEGEP in Montreal. The 128 participants came from five intact intermediate-level classes. It was their second of the two compulsory courses in ESL (called B-Block). They were all in the technical stream (TQ) and they had all taken and passed an A-block course. The BB data for all 128 participants were analyzed. For reasons that are explained in Section 4.2, the questionnaires for 106 participants were retained for analysis. Of the 106 participants who completed all parts of the questionnaire, the majority, or 92 participants, claimed French as their mother tongue, whereas the remaining 14 said they were from a variety of other language backgrounds. Participants ranged in age from 17-25, with just over half of the participants in the 19-20 age bracket, and the rest of the population dividing fairly equally into the 17-18 and 21-25 age brackets. There were 4 participants over the age of 25.

As shown in Figure 6, there were approximately the same number of participants per class. There were 60 in the experimental condition and 46 in the comparison condition. There were more females than males in both conditions, and indeed across all classes. The experimental group contained 17 males and 43 females, and the comparison group contained 17 males and 29 females.

3.4 Exclusions

One hundred and thirty-eight participants signed consent forms (Appendix 1) to participate in the study. Eight students were absent when the pre-questionnaire was

given, so their post-questionnaires were not used. Twenty-four others did not complete the post-questionnaire and their pre-questionnaires were not analysed. Thus, one hundred and six participants were retained for analysis. BB information from the thirty-two participants who were not analysed in terms of their questionnaires, was nonetheless retained and examined along with the data from the other one hundred and six.

3.5 Instruments

Several evaluative measures were used in this study. Analysis procedures for quantitative and qualitative data will be discussed in Chapter 4.

1. 'Teste de classement d'anglais langue seconde' placement test (T-CALS)

The scores on the TCALS, a placement test which is given to all students at the CEGEP, were used as a measure of participants' English level at the outset of the investigation to establish equivalency between the groups. Participants completed the TCALS prior to being placed in the first of their two English courses to establish which of the four levels they would enter, and remained in this same level for the second course. The TCALS recommended range for intermediate English at this CEGEP is 49 to 66. Participants' TCALS ranged from a low of 40 to a high of 76. However, lowest and highest scores can be considered outliers. The rest of the scores ranged from 45 to 69. There was no significant statistical difference in TCALS scores between the experimental and the comparison groups ($p=.70$). Thus, even though random selection

of participants was not possible in this classroom-based study, the groups can be considered equivalent for our purposes. See Table 1 below.

Table 1

TCALS t- test

Condition	**n**	**Mean**	**Standard Deviation**	**Standard Error Mean**
Experimental	53	58.8113	6.17083	.84763
Comparison	35	59.3143	5.75363	.97254

Note. n = 88.

p=.70, two-tailed

2. Student pre- and post-questionnaires

2.A) Student pre-questionnaire (see Appendix 4). The purpose of the pre-questionnaire was two-fold: to determine that the groups were analogous at the outset and to see how they changed from pre- to post-questionnaire in terms of learning and motivation levels. Many of the questions were adapted from Clément & Kruidenier (1983) and Dörnyei (1990) to take into account the unique context and requirements of this study. This questionnaire contained multiple choice and Likert-style questions. It also asked for descriptive information on gender, age, and language background (Sections 1, 2, 3). Additional information, such as mother tongue, was provided by the participants on a coded file card at the beginning of the term.

A pilot test of the pre-questionnaire was given in the equivalent level A-block course one week prior. This pilot lead to several minor changes to the pre-questionnaire. Two questions appeared confusing to the A-block students and their wording was subsequently made clearer. Four typos were also noted at this time and corrected.

2.B) Student post-questionnaire (see Appendix 5 for experimental participants' questionnaire and Appendix 6 for comparison participants' questionnaire). This post-questionnaire contained many of the same questions as the pre-questionnaire, but was expanded to allow participants to evaluate the BB or face-to-face activities which they completed, and to give an assessment of its worth in terms of language learning and usefulness. In addition to Likert and ranking scales, open-ended questions elicited explanations from the participants. A typographical error occurred on the BB questionnaire, namely two items were numbered 10.b. For the analysis, they have been renumbered 10.b.1 and 10.b.2.

Questions on these questionnaires called for a self-evaluation by each participant and contained multi-item scales to assess measurable behavioural criteria as manifestations of motivation (see Figure 7).

Dörnyei's Motivational Components (1994)	Motivational Variables (Measurable Behavioural Criteria)	Pre-Questionnaire	Post-Questionnaire
Interest (Learning situation level)	1. Extra-curricular language use	Section 4	Section 1
Expectancy (Learning situation level)	2. Levels of interest in and experience with computer and Internet technologies	Section 6	Section 3
	3. Attitudes towards group work	Section 7 (d, e, h, k) & Section 8 (e, f)	Section 4(d, e, h, k) & Section 6 (e, f)
Relevance (Learning situation level)	4. Task usefulness	-	Section 8
Satisfaction (Learning situation level)	5. Self-reported learning	-	Section 9
Self-Confidence (Learner level)	6. Anxiety /shyness	Section 7 (i, m, n, p)	Section 4 (i, m, n, p)
	7. Self-reported English ability	Sections 5 & 7c	Sections 2 & 4c
Motivational Orientation (Language level)	8. Motivational orientation	Section 9	-

Figure 7. Measurable Behavioural Criteria Taken From the Questionnaires.

3. Electronic Bulletin Board (BB) data

All data from the six assignments were kept in an on-line Microsoft Sympatico Network (MSN) commercial use bulletin board database.

4. Personal journals

Journal entries were completed in class on a regular basis. Students wrote one to two paragraphs in a logbook talking about the activities they did in class that day, and how they felt about them. Both groups were asked to do this. Although it was not done weekly in all of the classes due to class time constraints, all classes completed journals

for weeks 2,3,6,7,8,11 & 12. However, not all participants in all classes completed and handed in their journals.

5. Final projects and final marks

The marks from the final projects (Assignment Six) done in the two conditions were compared. Students' final marks in the course were also compared across conditions.

3.6 Instructional Procedures

The study began during the second week of a fifteen week course. The consent form (Appendix 1) and Questionnaire #1 were distributed to all students who were present. The students were told about the study and it was explained that the results would be shared with the students once the study had been completed. All students in every class signed the consent form.

A week later, students in the experimental group were given basic training for one hour in the computer laboratory. The training consisted of walking students through the registration to the bulletin board (BB) and teaching them how to login. Then students completed their first assigned activity in which they introduced themselves in their field-of-study BB area and asked questions of others. The field-of-study group areas were set up in advance by the participating teachers. To complete this first assignment, participants in the experimental group had only to enter the BB (login) and click on their field of study on the main site home page (see Figure 8). From there, they would click on the specific assignment on their field of study's home page (see Figure 9) and post their message.

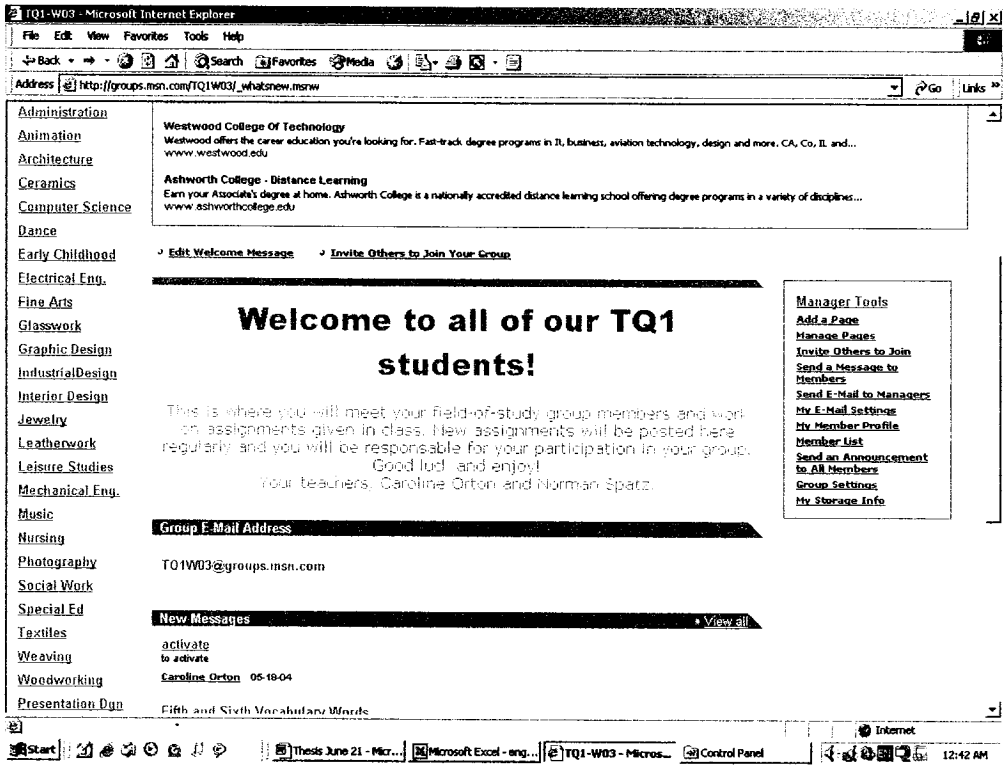


Figure 8. BB Main site home page, entitled "TQ1-W03".

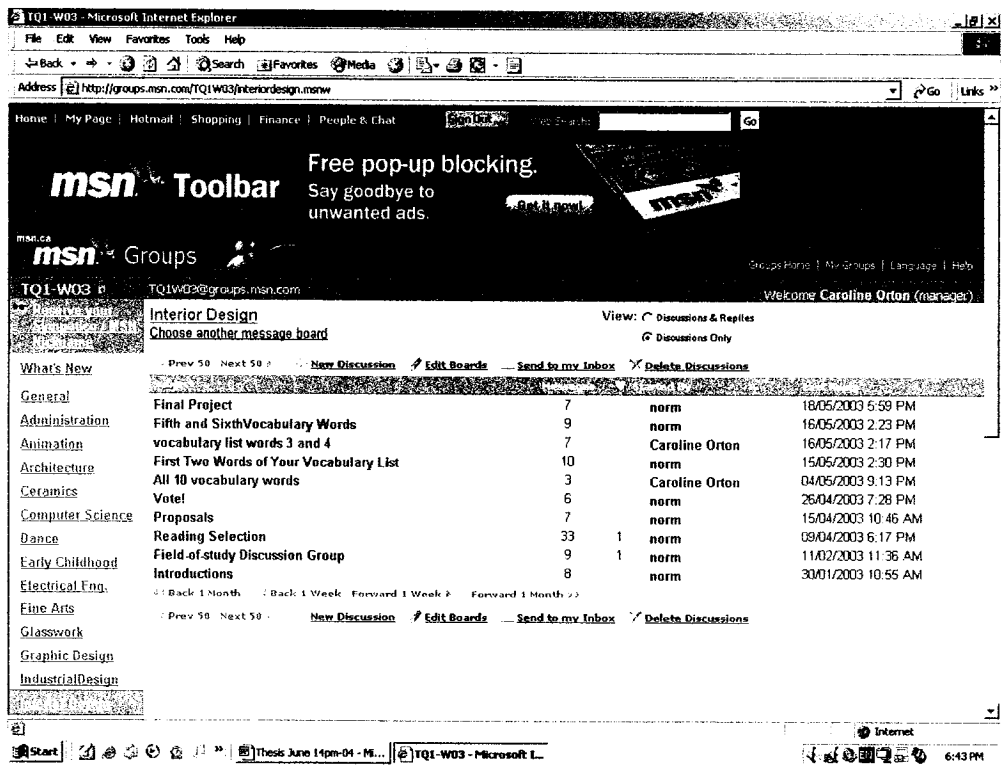


Figure 9. BB Field-of-study home page (Interior Design).

All three experimental classes had the same training experience, as both the researcher and the participating teacher were present for all three sessions.

Participants from five of the six on-line field-of-study groups where there were only one or two participants in the field of study across the three classes (fields 4, 5, 7, 12, and 27) were asked to move to other, larger groups in areas of similar interests. For instance, the student in 4 (Crafts) moved to 9 (Fine Arts), as did the student in 26 (Presentation Design)[3]. Therefore, by the time the participants were beginning their first summative assignment (Assignment 3: the reading jigsaws), 12 BB groups had been established (see Table 2). Of these 12 groups, it is important to note that half of them (6) were BBs which contained at least one participant who would otherwise have been alone to work in his or her field of study.

Table 2

Twelve Active BB Groups.

Field of study	**Regular participants for Assignments 3, 4 & 5**
1. Administration	5
2. Animation	2
3. Architecture	4
8. Electrical Engineering	5
9. Fine Arts	3
11. Graphic Design	7
13. Interior Design	6
16. Leisure Studies	3
17. Mechanical Engineering	4
18. Music	1
19. Nursing	8
22. Special Care Counselling	17
n	65

[3] The sixth small BB, 18 (music) was populated by one male student who refused to join another group and continued to post his work.

Six assignments were parallel in the experimental and comparison conditions and can be seen in summary in Table 3.

Table 3

Six parallel assignments[4]

	Experimental groups: *Participants in the experimental groups were taught how to use the BB system (MSN.com) and given time in class to complete some of the early assignments in order for the teacher to be available to help them overcome any technical difficulties.*	**Comparison group:** *Participants in the comparison group were placed in groups and given time in class to complete some of the early assignments.*
Assignment #1 (information gap)	1. Introduce yourself on the BB. Ask questions about your new group members. Check the board frequently and answer your new group members' questions. 2. Say what is your most/least favourite field-related subject, and why. Comment on others' choices and be prepared to report on your discussion in class.(formative)	1. Introduce yourself to your in-class group. Ask questions about your new group members. Answer your new group members' questions. 2. Say what is your most/least favourite field-related subject, and why. Comment on others' choices and be prepared to report on your discussion to a different group or to your class. (formative)
Assignment #2 (information gap)	1. Explain one of the following three topics in your field of study on the BB: - A new development - A controversy - Something that your are studying in school 2. Suggest a place in the neighbourhood that could be relevant to this topic. This means a place where some of the principles that you are talking about could be seen in action. 3. Read the other responses to this discussion and suggest places in the neighbourhood that could be relevant to these topics. (formative)	1. Explain one of the following three topics in your field of study: - A new development - A controversy - Something that your are studying in school 2. Suggest a place in the neighbourhood that could be relevant to this topic. This means a place where some of the principles that you are talking about could be seen in action. 3. Listen to the others and suggest places in the neighbourhood that could be relevant to their topics. (formative)
Assignment #3 (jigsaw)	1. Find an interesting and topical reading specific to your field of study, and post the link to the BB in order to share it with your group. 2. Write 6 comprehension questions about the reading you have chosen for other students in your group to answer. 3. Go back to the BB and read another student's posted reading and answer the questions. 4. Discuss/correct their answers to your questions. (summative) (This was done twice)	1. Find an interesting and topical reading specific to your field of study(ies). 2. Write 6 questions about each of the readings you have chosen for other students in your group to answer. Make copies of your reading and questions for each member of your group and for your group's binder. 3. Read another student's reading and answer the questions. 4. Discuss/correct their answers to your questions. (summative) (This was done twice)

[4] Refer to Appendix 2 for TQ1 course outline to see how these activities are integrated into the goals of the course.

Assignment #4 (problem-solving/ information gap)	Work as a group to create a French-English translation dictionary of key terms related to your field of study and post new entries regularly to the BB (summative).	Work as a group to create a French-English translation dictionary of key terms related to your field of study(ies) and add new entries regularly to a section of your readings binder. (summative)
Assignment #5 (problem-solving)	Write a proposal for a project that you would like to do in your field of study with your group and post it to the BB. (summative)	Write a proposal for a project that you would like to do in your field of study with your group and make enough copies for the other students in your group. (summative)
Assignment #6 (a. decision-making) (b. opinion exchange)	a. Vote: Read the proposals of the others in your group and as a team decide (by vote on the BB) which one you will do as your field-of-study research project. (formative) b. Work as a group to divide up the work, conduct research and complete a field-of-study related project. Post the jointly-created project, and hand in a printed version as well, by the deadline. (summative)	a. Vote: Read the proposals of the others in your group and as a team decide (by voting) which one you will do as your field-of-study research project. (formative) b. Work as a group to divide up the work, conduct research and complete a field-of-study(ies) related project. Print and hand in the jointly-created project by the deadline. (summative)

In the initial activity, in which the experimental group introduced themselves on-line to their new field-of study partners, students were simply grouped with all of the others in the same field of study when they entered their group area on the BB. There was no effort made to limit the group sizes at this time. Experimental participants received the following instructions on-line in the introductions area for their field-of-study group (see again Figure 9 and Table 3):

A/ Click on 'Reply' to this message and do the following:

1. Introduce yourself to the others in your field-of-study group.

2. Ask them questions about themselves.

3. Answer these questions:

- Which program-related course do you like the most? Why?
- Which program-related course do you like the least? Why?

B/ Now, read what other students in your field-of-study have written, and 'reply' to them. Answer their questions.

Due to the asynchronous nature of the BB, they were all told to wait to do part B/ of this assignment the following week. A typical example of participant response interaction to the first assignment can be seen in this excerpt taken from the Electrical Engineering BB (see Figure 10):

Electrical Eng. : Introductions

Reply	Recommend (1 recommendation so far)	Delete	Message 2 of 13 in Discussion

From: Participant 1 – Class 3 Sent: 28/01/2003 11:42 AM

I'm a student. I'am studying electrinic in audiovisuel field. It will give me the possibility to work for a television(TVA, RDS, MUSIC-PLUS...) or for a show. I like easy courseand I don't like french. And you crazy poeple what are you studying? What do you like and what you don't like?
What is your name?
Are you the kind of people who study very hard?
--

Reply	Recommend	Delete	Message 4 of 13 in Discussion

From: Participant 2 – Class 3 Sent: 28/01/2003 12:02 PM

Hello boys!
I'm here for my second class of english...Are you happy to be in this group?Do you speak other language like spanish?I'm in a general program.I make only 4 course.But before I went to the electrical eng.I love the music and my favorite style it's the latin reggae.

Reply	Recommend (1 recommendation so far)	Delete	Message 5 of 13 in Discussion

From: Participant 3 – Class 1 Sent: 30/01/2003 10:20 AM

Hi, I'm --, I used to be called Boulingarde Le Viril [Not his real name] few minutes later, but Caroline didn't want me to... Damn I would like to be called Boulingarde Le viril. I can't beleive I can't. Anyway, I study in Electric engeneiring (something like that) and I really like my ex-teacher --. He was a source of inspiration for me. I'm asking to you, is anyone who love -- like me ???

My favorite course is "–" because my teacher look like the "professeur Tournesol" in the adventure of Tintin. I'm not really loving "--" because I'm bored to do things like that and the teacher is so boring (héhé --).

In the end, what are you enjoing the must, sex or chocolate ????

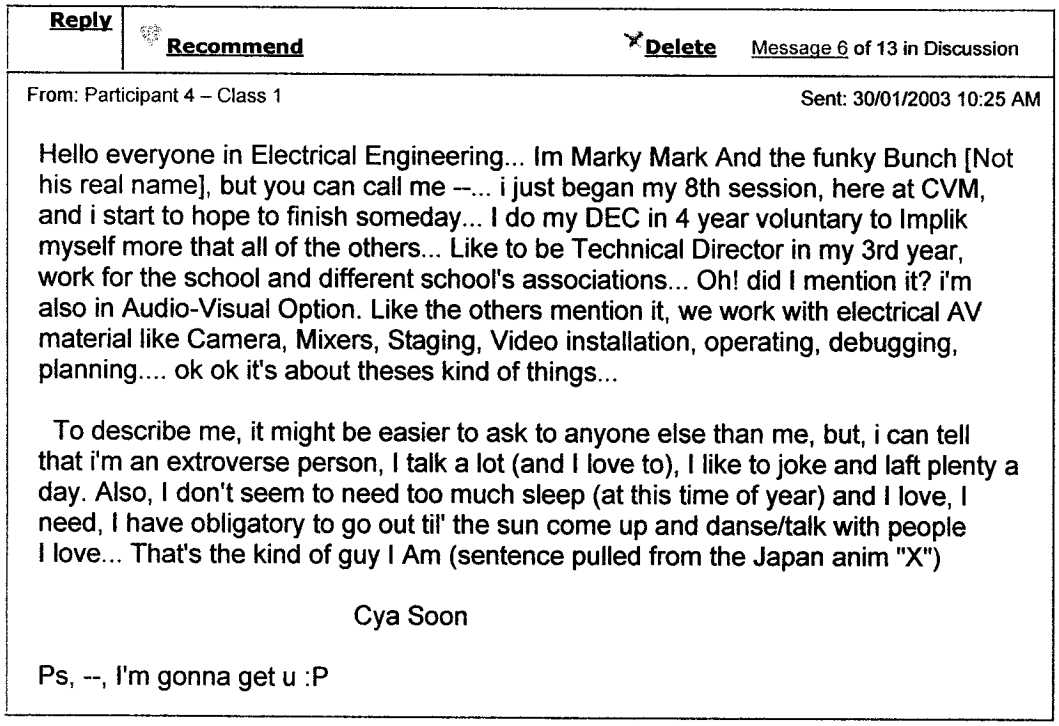


Figure 10. BB Data from Electrical Engineering: Introductions page.

Concurrently, the comparison participants performed oral introductions face-to-face in the language laboratory. They were placed in groups by field of study as well and asked to sit together for the activity. Due to the fact that some fields of study were better represented than others, groups were divided in two if they numbered more than five members. One group of seven administration students refused to be divided and spent the first half of the session as a large group. Some participants were alone in their field of study. These participants were paired up with others, from different fields of study, who were also alone. The following instructions were written on the board:

A/ 1. Introduce yourself to the others in your field-of-study group.

2. Ask them questions about themselves.

3. Answer these questions:

- Which program-related course do you like the most? Why?
- Which program-related course do you like the least? Why?

B/ Listen to what other students in your field-of-study are saying, and answer any questions they might have.

Part B was completed the same week as part A.

The second assignment was given the following week and involved speaking about their fields of study. Instructions on the BB were as follows:

1. Explain one of the following three topics in your field of study:
   - A new development
   - A controversy
   - Something that you are studying in school
2. Suggest a place in the neighbourhood that could be relevant to this topic. This means a place where some of the principles that you are talking about could be seen in action.
3. Read the other responses to this discussion and suggest places in the neighbourhood that could be relevant to these topics.

Again, students in the experimental groups were all told to wait to do step 3 the following week. The control participants received these instructions written on the board in class:

1. Explain one of the following three topics in your field of study:
   - A new development
   - A controversy
   - Something that you are studying in school

2. Suggest a place in the neighbourhood that could be relevant to this topic. This means a place where some of the principles that you are talking about could be seen in action.
3. Listen to the others and suggest places in the neighbourhood that could be relevant to their topics.

These first two assignments were chosen based on several factors. Firstly, Hiltz and Turoff (1993) talk about the importance of a "social-emotional exchange" by group members who, they state, need to become comfortable with each other before attacking any specific problem-solving type tasks. They recommend introductory and personalized activities as ways to help them get to know each other and motivate them initially (p.292). Secondly, information gap tasks of this nature were identified on Pica et al.'s (1993) task typology as engendering communication and interaction of the type which leads to negotiation for meaning and learning through practice. Finally, they are not difficult, and involve the sharing of personal information, which is considered to be easier for second language learners to handle than information about wider subjects (Citizenship and Immigration Canada, 2000). Thus they seemed a good choice for early tasks. It was hoped that they might provide participants with early success and the motivation to try the more challenging tasks to come. They were formative in nature and were not assigned marks.

The third assignment was to find and share interesting readings of approximately 750 words specific to an area or topic within their field of study which they would like to know more about. All students did this twice during the session.

Experimental participants were told this and given these additional instructions on-line:

A/ Please respond to this message with your reading selection for homework.

1. Type in or paste the title and address of your article. Once you have done this push '**return**' in order to have this information appear as a direct link to the article.

2. Write your six questions about your article.

B/ Go back to the BB later and read another student's reading selection and answer their questions.

C/ Correct the other students' answers to your questions.

Figure 11 below is an example of participant interaction on the BB for this assignment. It was taken from the Special Education BB.

Special Ed : Reading Selection

Recommend	Delete	Message 11 of 41 in Discussion
From: Participant 1 – Class 1		Sent: 20/02/2003 5:40 AM

www.northernleaf.com.sg/thecharities/minds

1. *Go to "Causes of Intellectual Disabilities".* **We can separate the causes of intellectual disability. What is the categories?**

2. **Then, summarize two of them.**

3. *Go to " About MINDS".* **What means MINDS ?** *(complete name)*

4. *Stay in "About MINDS".* **Write the four MINDS ' Establishements.**

5. **Explain the four MINDS ' Establishements**. *Two sentences maximum for each establishements.*

6. **Do you think that we have similar programs in Montreal? Give an example.**

Recommend **Delete** Message 12 of 41 in Discussion

From: Participant 2 – Class 1 Sent: 20/02/2003 10:08 AM

http://teachers.net/gazette/JUN02/bruno.html

#1. What is the subject of this text ?

#2. Why it's important for children to take an «action break» ?

#3. What the school psychologist suggest if you have to bring your children where the silence is required

#4. In what kind of position are you risking yourself to be if you bring your children in a quiet place ?

#5. Why it's important to play with your children often as you can ?

#6. What can be the effect if you read everyday with your children ?

Enjoy ! --

Reply **Recommend** **Delete** Message 13 of 41 in Discussion

From: Participant 2 – Class 1 Sent: 20/02/2003 10:45 AM

Hello [Participant 1],

I like reading your article because it talk about an another country culture about the profession.

Answers :

#1. Inheritance - Chromosomal abnormality - Infections and intoxication - Trauma - Malnutrition - Radiation - Metabolic disorders

#2. Trauma : Physical trauma may result in brain injury of the foetus
Malnutrition : when the mother is preagnet, she need to feed well, otherwise t the baby can be affected.

#3. Mouvement for the intellectually disabled of Sigapore

#4. Special schools - Employment development centres - Day activity centres - residential home

#5. a) Help promote the development of every child who are beetween 4 and 18 years old.

b) EDC work the social skills of intellectually disabled person under 18. This training develops their potential and prepares them for open employment.

c) Offer training programs for home management and social skills.

d) This residential home provides residential care for intellectually disabled persons who have 10 years or above. They have routine and learn basic living skills.

#6. Of corse we do. We have residential home as well, we also have program to help intellectually disabled persons and we have organism like CLSC and CHSLD.

Ok ciao !

Reply | **Recommend** | **Delete** | Message 14 of 41 in Discussion

From: Participant 1 – Class 1 Sent: 20/02/2003 11:10 AM

Hi [Participant 2],

How are you? I can now put a face on your name
As you know, I learnt your article. Sincerely, I think that your article is great because it can help mothers or parents with they children. So, I will answer your questions.

1. The subject of the text is " Tips for Motivating Young Children" writting by Mrs Bruno.
2. It is important for children to take an "action break" because it can buy you another period of tranquility or children's cooperation. Also, it can keep their developmental capabilities in mind.
3. The psychologist suggest that you arrange supervision for them elsewhere.
4. You are going to be frustrated and being in an unmanageable situation if you bring your children in a quiet place.
5. It's important to play with your children because they learn and express themselves through play. Children give their thoughts and feelings most directly through play.
6. If you read everyday with your child it will stimulate his imagination, memory, curiosity, language and concept development, acquisition of knowledge and interest in the written word. It will help also for his academic success.

That's enought!!! Say hi to -- for me and have a nice week end.
--

Reply | **Recommend** | **Delete** | Message 22 of 41 in Discussion

From: Participant 1 – Class 1 Sent: 06/03/2003 3:42 AM

Hi [Participant 2], How are you? I read your answers about my text. It's was good but you have two wrong answers. In the question one, you are suppose to write the main categories. The good answer is : Before birth, During birth and After birth. In the question two you are suppose to summurize two of the three main categories; not the points of these categories.
See ya, --

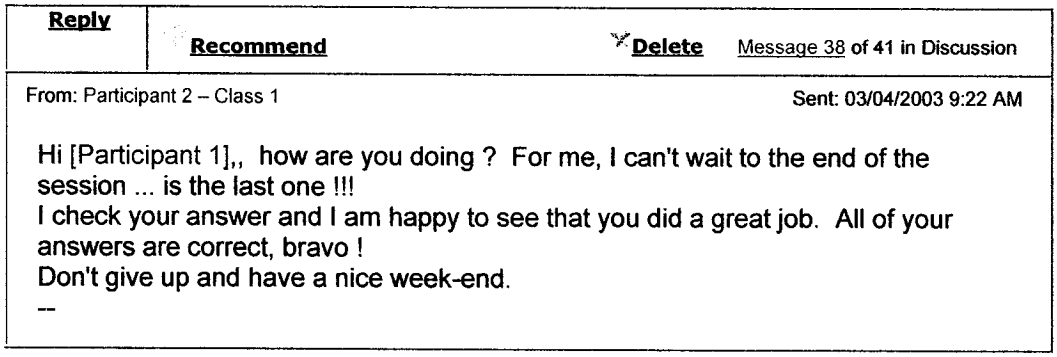


Figure 11. BB Data from Special Education: Reading Selections page.

The comparison participants copied these instructions from the blackboard:

1. Find an interesting and topical reading of approximately 750 words specific to your field of study(ies).
2. Write 6 questions about the reading you have chosen for other students in your group to answer. Make copies of your reading and questions for each member of your group and place copies in your group's binder.
3. Read another student's reading and answer the questions.
4. Discuss/correct their answers to your questions.

Whereas participants from the experimental group were, by the nature of on-line links, restricted to readings found on the Internet, participants in the comparison group were not. Nevertheless, most of the comparison participants chose their readings from the Internet anyway. This is likely due to the fact that finding English texts is challenging for students as the school library has few English books, and this would probably be the case for many of their neighbourhood libraries as well. Comparison group reading selections were much like those of the experimental group in terms of length and content. Questions were also of a similar quality. The researcher and colleague listened in to their in-class discussions and noted that comments of a

personal, chatty nature were exchanged, as they were on the BB for the experimental group, when the students exchanged articles in class. However, the comparison participants did not include personal comments with the written responses to the questions they answered.

This third assignment was chosen for the following reasons. The main goal was to have participants read in English while conducting preliminary research in their fields of study in areas of interest to them. This jigsaw-type task, according to Pica et al.'s (1993) Typology, is one of the most effective of the communication tasks, in that it leads students to modify their interlanguage with the necessity for more clarifications and negotiations for meaning than all of the other task-types. In other words, it requires two-way communication. This applied to comparison and experimental groups. Furthermore, the experimental participants would gain practice and confidence in navigating the Internet (which is mostly in English) and using the BB. This task is of an intermediate level of difficulty and should continue to increase participants' satisfaction, and lead to expectations for future successes. Thus, as they went into the more difficult assignments to follow, they should have felt confident and able. This assignment, and the next, the vocabulary, were summative. Nine marks were allotted for Assignment three and five for Assignment four. However, the quality of the work was not evaluated. Marks were given for each completed element of each task.

Assignment four was given as homework. It asked students to work as a group to create a mini vocabulary dictionary related to their fields of study. This assignment was broken down into four stages. This following message was posted for the

experimental group on the BB in week 7 (at the halfway point in the course) and written on the board for the Comparison group that same week.

> Experimental: Post two vocabulary items that you think are important to your field of study by responding to this message. You must provide a French word, an English translation and an English definition for each item.
>
> Comparison: Find two vocabulary items that you think are important to your field of study by responding to this message. You must provide a French word, an English translation and an English definition for each item. Place these in your group's binder.

In class, students were told to check each others' words and definitions for errors, and to make suggested changes if necessary.

This assignment was repeated in week 8 and again in week 10. In week 11, students were asked to add four final words, now totalling ten. These were the instructions they received:

> Experimental: Please re-post your other field-of-study words (French term, English translation and English definition) and add more so that you have a total of ten grouped together here. Then submit your list to the BB. Please also print a copy for your teacher and give it in next class.
>
> Comparison: Please rewrite your other field-of-study words (French term, English translation and English definition) and add more so that you have a total of ten grouped together on one sheet. Then give it to your teacher next class and place a copy in your group's binder.

Again, students were told to check each others' words and definitions for errors, and to make suggested changes if necessary, before they were handed in.

This fourth assignment was chosen to help participants recognize the importance of knowing the terminology related to their field of study in English. In a loose sense, it is a problem-solving task. The problem is that they need to determine which words from their fields of study are important for them to know in English, and they need to find the correct definition for these words in English. Finally, it can also be considered an information gap activity in that participants share their words and definitions with each other, and correct each others' errors. The interaction level is not as high as that of the three previous tasks, and in this way, this task seems to fall in the middle range of Pica et al.'s Typology (1993).

In the fifth assignment, students were guided to make proposals to their groups for field-of-study research projects. This began with writing. Participants in the experimental groups were told to write a proposal for a project that they would like to do in their field of study and post it to the BB (See an example of the experimental group's proposals on the BB taken from the Nursing BB in Figure 12 below.). A similar procedure was followed in the Comparison classes. Students were asked to join their field-of-study groups and present their proposals (prepared in advance for homework) orally. The other group members listened and took notes.

Nursing : Proposals

Recommend	Delete	Message 2 of 9 in Discussion

From: Participant 1 – Class 2 Sent: 07/04/2003 12:08 PM

Hi gang !
There'S my propsal!

Give me feedbacks!

--

We are few people in that class and we must do a proposal in our study field. Each of us must suggest a place and something to do there. It must be related in all ways to our study field. And more, it must be near the school without any charges.

So what I suggest, is to go to the CLSC downstairs, at the third floor and do prevention for the MTS. There's a lot of young adult who have or had those problems and it might be good to do some teaching and prevention in the CEGEP.

With the help of the nurse from the CLSC, we should do a stand downstair, at the third floor, where everybody is passing.

With her collaboration, we shall give flyers, documentations and some condoms. We shall give informations about MTS and give numbers and place where people can have help if needed. The stand shall be prepare with the help of the nurse. Of course, we 're gonna ask her help few weeks before and we're gonna ask the direction too. With the participation of that people, we will be able to help few people who, sometime are to shy to talk about their little problems and maybe, give them a big push to prevention here, in the CEGEP.

So maybe, the day that the stand will be downstair, the class can come see how it goes and ask us questions.

When I say us, it means all the girls in the nursing, will be going there in a certain period, depending of our avalaiblity on that day. We shall do a schedule to settle everybody on different hour, but the CLSC 's nurse shall be with us most of the time to help us with her knowledge.

So , that's my proposal.

Recommend Delete Message 3 of 9 in Discussion

From: Participant 2 – Class 2 Sent: 07/04/2003 12:33 PM

Gr : 6349 Mon AM

Proposal 2

Problem : The lack of information on "condomes" by the student of the " Cégep du Vieux Montréal".

Solution : Create a kiosk to teach and give information's about the "condomes" to prevent the sickness.

Plan : - Contact the administration to have the permission to install my kiosk in the main entrance of the Cegep.

- Find the right information about the "condomes" at the CLSC des Faubourgs.

- Contact the nurse at the Cegep to have ideas for my kiosk and how can I organized it to be well prepared.

- Create the kiosk in the main entrance to be sure that all the students can see it.

- Inform the students about the symptoms, about how can they prevent the sickness and what they have to do if they contract it.

Recommend Delete Message 4 of 9 in Discussion

From: Participant 3 – Class 2 Sent: 07/04/2003 12:35 PM

Proposal

My problem is the new virus call « pneumonie atypique»it is a new sickness that seem to scare a lot of people. It is coming from Hong Kong and at Toronto there are already height victims and maybe it is coming soon to Montréal. I chose that topic because it is an actuality subject that touches everyone.

My solution is to give more information on this new virus at the community to less those fears and help prevent the contact with that virus. I wish we can go to the hospital Saint-Luc witch is near the college and make a flyer that we can give to people on how you can prevent contract the sickness, what are the symptoms of the sickness and how it came from.

I can get some information about the new virus on the internet; also my teacher can give me some clue about that topic. I am sure I can learn more on that subject at the library and also I can go at my CLSC where it is sure they have a lot of information for us.

Recommend **Delete** Message 5 of 9 in Discussion

From: Participant 4 – Class 3 Sent: 09/04/2003 12:43 PM

the purpose of that proposal is to find a location that we can use to illustrate our field of study. I think that the CLSC could be a good idea u guys are probably wondering why?!
well i think it,s the best place because its not too far so we won't need to walk for hours and hours we could talk about the PREVENTION of some diseass
all u people probably notice in the news lately that there's this new illness out there the SARS virus. we could base our speech about this and that's where the CLSC location comes in because it's the place where the nurses talk about prevention and educate the population about their health
so the plan is that we go a out break about that new pneumonia virus thing and of course tell them how they can catch the disease and to do that we've to do some research about it first and that was it

Recommend **Delete** Message 6 of 9 in Discussion

From: Participant 5 – Class 3 Sent: 09/04/2003 7:06 PM

My proposal
I would like to visit, with the class, the hospital Saint-Luc. This hospital is a good representation of a typical hospital in Montreal because this place contains all itinerants, prostitutes and all the accidents in the center of Montreal. Certainly, this is the most heavy emergency in Montreal. The biggest list of gaiting is there at the emergency just to see a specialist of health. There is missing a lot of doctors and nurses.
I could be very happy to visit this hospital, because I never visit it, to show how the health services are in bad condition and be sensitive to the population to help people in difficulties.
Thank you and good luck!

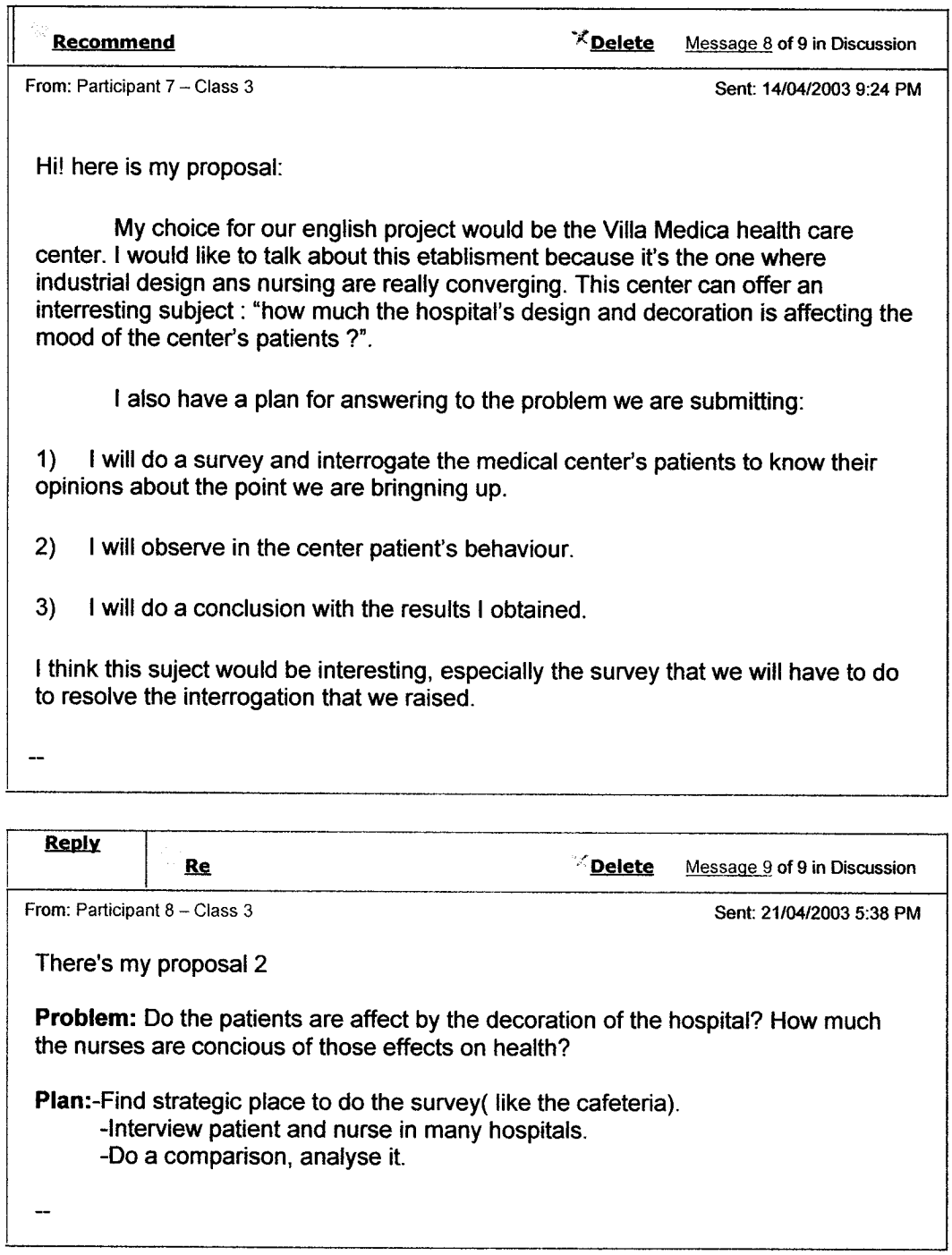
Recommend **Delete** Message 7 of 9 in Discussion

From: Participant 6 – Class 3 Sent: 10/04/2003 11:04 AM

For the final oral expression we have to choose a location near of cegep that illustrate ours field of study. and the better place must cost nothing to visit.

What I suggest is to go at St-Luc hospital. Because it's near of cegep. And we see many junky and homeless people, so this kind of people have in many case sickness transmit by needle exchangelike AIDS, hepatite B and C. They're incurables sickness that we can contractwhen we treat these patients.

What I suggest is to visit the emergency to see th fullness of the problem. After I think we should give some information about these sickness and some syringues to people who takes injectable drugs.



Recommend | Delete | Message 8 of 9 in Discussion

From: Participant 7 – Class 3 | Sent: 14/04/2003 9:24 PM

Hi! here is my proposal:

My choice for our english project would be the Villa Medica health care center. I would like to talk about this etablisment because it's the one where industrial design ans nursing are really converging. This center can offer an interresting subject : "how much the hospital's design and decoration is affecting the mood of the center's patients ?".

I also have a plan for answering to the problem we are submitting:

1) I will do a survey and interrogate the medical center's patients to know their opinions about the point we are bringning up.

2) I will observe in the center patient's behaviour.

3) I will do a conclusion with the results I obtained.

I think this suject would be interesting, especially the survey that we will have to do to resolve the interrogation that we raised.

--

Reply | Re | Delete | Message 9 of 9 in Discussion

From: Participant 8 – Class 3 | Sent: 21/04/2003 5:38 PM

There's my proposal 2

Problem: Do the patients are affect by the decoration of the hospital? How much the nurses are concious of those effects on health?

Plan:-Find strategic place to do the survey(like the cafeteria).
-Interview patient and nurse in many hospitals.
-Do a comparison, analyse it.

--

Figure 12. BB Data from Nursing: Proposals page.

Assignment five was more challenging than the first four and can be considered the first step of the final project. It can be defined as a problem-solving task in that the

problem, that each BB group must find and agree on a specific topic to research and write about, resembles the brainstorming that Hiltz and Turoff (1993) identify as the first problem-solving phase of online group work. This assignment was summative and four marks were allotted to it (see Appendix 3 for marking criteria for the BB group project Part 1: Assignment 5).

Then, in the sixth assignment, experimental participants were first asked to read all the proposals, and click on the discussion called 'Vote' (see 6.a in Table 3). All students had to vote for one of the proposals posted in their field-of-study group area. Instructions specified that they should write about the merits and failings of the proposals and say why they were voting for one proposal or another. They were told they could vote anytime or change their vote or comment on the decisions of other people before our week 11 class at which time the votes would be tallied and the winning proposals announced. Figure 13 shows how one group, Nursing, voted on-line (not all students voted). Comparison participants were also asked to discuss the merits and failings of each of the proposals in face-to-face groups, and vote.

Nursing : Vote!

Recommend	Delete	Message 2 of 6 in Discussion
From: Participant 4 –Class 3		Sent: 15/04/2003 10:43 AM

well
i think we should choose the proposal of [Participant 6] because its the only one who was actually some kind of interesting
and it could be fun to realize it

Recommend **Delete** Message 3 of 6 in Discussion

From: Participant 5 _ Class 3 Sent: 15/04/2003 10:49 AM

I vote for [Participant 6]'s proposal because I think this is the best proposal. It's a good idea because it represents the best of my field of study and it's better than doing a kiosque at the cegep of pneumonia. I would like to visit the hospital St-luc and I think that it will be more interesting for everybody.

Recommend **Delete** Message 4 of 6 in Discussion

From: Participant 7- Class 3 Sent: 15/04/2003 11:31 AM

hi everbody
i am voting for my project because it will the better solution if I want to work with my partner and match our fields of studies
--

Recommend **Delete** Message 5 of 6 in Discussion

From: Participant 8 – Class 3 Sent: 21/04/2003 5:11 PM

Hello everybody!

I think we should vote for [Participant 7], because the relation between industrial design and nursing is interesting; I think that's thruth that the decoration (luminosity) affect our mood.
Also, the proposal of [Participant 6] is great, because those problems are actual and in constant elevation.
--

Reply **Recommend** **Delete** Message 6 of 6 in Discussion

From: Participant 1 – Class 2 Sent: 21/04/2003 8:26 PM

Hi gang!

I vote for the proposal that [Participant 6] made!

It's a good idea and visiting an emergency is always interesting (except when you are sick ...)
St_luc is a place full of people and it might be good to peek a little...
I definitly vote for her !

chow chow

Figure 13. BB Data from Nursing: Vote page.

Assignment 6. a) is a decision-making type task, which falls in the middle range of Pica et al.'s (1993) Typology, and is considered to be somewhat effective in terms of engendering modifications in the interlanguage of the interlocutors. It is also similar in nature to Hiltz and Turoff's second problem-solving phase, that of Evaluation and consensus exploration, wherin participants vote and decide on a specific topic for their final projects. Its level of challenge is higher, as students must come to a consensus here, and the outcome determines their future direction, and likelihood of success.

Once group members had negotiated and decided together on one project, they then worked together to complete this project as a team by the week 15 deadline.[5] Comparison groups were given one hour in class on two occasions. Experimental groups were given areas on the BB for field-of-study project discussion and negotiation of work sharing. This is Assignment 6.b). Figure 14 below shows how it was settled in Nursing.

Nursing : Final Project

Recommend	Delete	Message 1 of 5 in Discussion
From: [Colleague] (Original Message)		Sent: 21/04/2003 8:56 PM

Given the number of people in Nursing that are in this forum and given the fact that only two solutions were chosen by numerous people, it makes sense to say that the group should split into two groups to do their projects. Some of you will work on the [Participant 7] project and others will work on [Participant 6]'s project.

Norm

[5] An extension was given from the original week 12 deadline when students asked for it. All five classes were given the same extension.

Recommend **Delete** Message 2 of 5 in Discussion

From: Participant 1 – Class 2 Sent: 28/04/2003 12:08 PM

hi [Participant 6]!

It seems that I will be one of your teamates...

I find your project really find and it's okay with me.
For the needle exchange, it might be a little bit complicated thought...
But if I can do something, (informations ...) please [Participant 6] let me know...

So, write me for what you want me to do ...

Chow chowe

Recommend **Delete** Message 3 of 5 in Discussion

From: Participant 9 – Class 1 Sent: 02/05/2003 10:16 AM

Hey [Participant 6],
I would like to be one of your parteners too. I really love your idea.
The fact that I'm not in any of your class will be difficult, but anyways please try to not left me out. It seems that my theacher want us to ended the final project (300 words) on next thursday (May 8). So please one of you contact me soon and let me no what you want me to do.

Recommend **Delete** Message 4 of 5 in Discussion

From: Participant 6 – Class 3 Sent: 06/05/2003 9:24 AM

Hi [Participant 1] and [Participant 9] , well i didn't think that my project will interest many people. So I don't really know how we can split the work but I begin with partner in my class. [Participant 4 – Class 3] will talk about th emergency at st-luc , [Participant 5 – Class 3], I don't know and my about hepatitis and aids. Maybe you could talk about the ressource and the teatching we have to do to prevent the transmission and how the junkee can get some synringue free.

Recommend **Delete** Message 5 of 5 in Discussion

From: Participant 9 - Class 1 Sent: 07/05/2003 4:25 PM

Ok [Participant 6],,
I will talk about the ressources we can found in the hospital.
(It's also for you guy's too)
1-But when do we meet to put our information together for the final project?
2-I also have to give my teacher a date for the final oral presentation .

I think it would be a good idea to put all our infomation together on the net, and for the oral everybody would just have to be agree on a same date. My teacher gave me those choices: wenesday 14/05, thursday 15/05, monday19/05 and wenesday21/05

*Sorry for being in such in a hurry like that, I know you must be very buzy now, but I have to give an anwser to my teacher.

Figure 14. BB Data from Nursing: Final Project page.

This final task, Assignment 6.b), is an opinion exchange task type, and is the task type on Pica et al.'s (1993) Typology of tasks that demands the least amount of comprehension, feedback and modified production. It also resembles an amalgamation of Hiltz and Turoff's (1993) third (Relationship Judgements and Model Formulation) and fourth (Comprehension and Decision) phases, in that it requires student participants to first formulate the "model" (determine the exact form the project will take and the steps needed to get there) and then decide who will contribute what. For this reason, it was considered a necessary element of the final field-of-study project.

Experimental participants were asked to post their jointly-created projects and hand in printed versions, as well, by the deadline. Comparison participants were similarly asked to print and hand in their jointly-created projects by the deadline. This assignment was summative in that marks were given for the final written project, with points reflecting the level of group cohesion (see Appendix 3 for marking criteria for the BB group project Part 2: Assignment 6).

3.7 Analysis Procedures

Questionnaire data were statistically analysed using Cronbach alpha internal reliability testing, *t*-tests and repeated measures analysis of variance (ANOVA). Other information was examined with frequency charts.

Cronbach alpha internal reliability testing was used when multi-item scales, created on the basis of a theoretical hypothesis, were grouped for comparisons within and between participant groups. Alpha levels that are above .6 are acceptable, and alphas approaching .7 are considered to be a very good indication of internal reliability, suggesting that questionnaire items can be grouped together.

3.8 Analysis Procedures for the Quantitative Data

Two-tailed *t*-tests were conducted to test for between group variations for items which appeared only on the post-questionnaire. A *t*-test was also done for the participants' TCALS scores to test for equivalence between groups. Repeated measures ANOVA was used to test for differences between the pre- questionnaire and the post-questionnaire (within group variation) and between group variation as well. The alpha level for the entire experiment was .05. The Bonferroni adjustment was made for multiple statistical tests in the same experiment, placing the alpha level for individual tests at .01.

Sections 1 and 2 of the pre-questionnaire (see Appendix 4) asked about the age and sex of the participants. Section 3 of the pre-questionnaire included six yes/no items on language background. Section 4 of the pre-questionnaire and Section 1 of the post-questionnaire (see Appendices 5 & 6) contained five (pre-) and six (post-) items scored

on a four-point scale of "never" (0[6]), "occasionally"(1), frequently" (2) and "always"(3) and assessed extra-curricular language use. Sections 5 and 6 of the pre-questionnaire and Section 2 and 3 of the post-questionnaire included ten items (Sections 5 pre- and 2 post-) and eight items (Sections 5 pre- and 3 post-) respectively and were scored on four-point scales with "poor" (0), "OK" (1), "very good" (2), and "excellent" (3). These items assessed the participants' own rating of their English and computer abilities.

Section 7 of the pre-questionnaire and section 4 of the post-questionnaire included 17 and 18 items which were scored on a four-point scale of "never" (0), "occasionally"(1), frequently" (2) and "always"(3). These items assessed participants' individual learning styles and learner characteristics. Section 8 of the pre-questionnaire and section 6 of the post-questionnaire included eleven (pre-) and eight (post-) items scored on a four-point scale of "not at all" (0), "a little" (1), "a lot" (2), and "very much" (3) assessing their individual learner preferences. Section 9 of the pre-questionnaire and section 7 of the post-questionnaire included ten sentences which the participant was asked to rank from one to ten with one being the most important reason for studying English and ten being the least important reason for studying English.

The post-questionnaire contained four additional sections. Section 5, assessing learners' comfort level, contained five items and was worded and coded as in Section 4 of the post-questionnaire. Section 8 was a ranking of ten activities from most to least useful. Sections 9 and 10 were slightly different for participants in the experimental treatment than for participants in the comparison treatment. However, care was taken to

[6] All scale numbers 1 through 4 were converted to 0 through 3 for purposes of analysis of the questionnaire data.

keep them parallel. Section 9 examined participants' self-assessments of improvements in their English abilities due to "using the bulletin board to do projects" (experimental group) or "doing the group projects" (comparison group) It did so using a four-point scale of "not improved at all" (0), "improved a little" (1), "improved quite a bit" (2), and "improved a lot" (3).

It additionally assessed the experimental condition participants' comfort level with the bulletin boards with three four-point scales: a) "extremely hard" (0), "quite hard" (1), "not too bad" (2), and "easy" (3); b) "very uncomfortable" (0), "a bit uncomfortable" (1), "mostly uncomfortable" (2), and "very comfortable" (3); and c) "not at all" (0), "a little" (1), "a lot" (2), and "very much" (3). Section 10 included two yes/no questions and one four-point scale item of "not at all" (0), "a little" (1), "a lot" (2), and "very much" (3). One of the items asks about the group projects in general and the other asks about the final projects for both conditions. The experimental questionnaire contained one additional yes/no question about whether or not participants worked with students from other classes.

Certain items from the BB were also analysed quantitatively, such as total number of messages posted to the BB, total and average number of messages per participant and average participation in each field of study per assignment.

3.9 Analysis Procedures for the Qualitative Data

The qualitative data came from three different sources: open-ended questions on the post-questionnaire, participant journals, and data from the BB.

3.9.1 Open-ended questions

Qualitative data from the open-ended questions on the post-questionnaire were grouped in a grounded manner (William and Burden, 1999), that is with no pre-determined categories imposed on the data. Section 8.b) asked why participants ranked a certain activity as number one, and 8.c) asked why participants ranked a certain activity as number ten. First, participants' reasons for their ranking choices were listed in descriptive phrases. Then, a first category, "little or no information", was created for instances when either there was no answer provided, or the answer provided did not answer the question in a comprehensible way. The phrases were next grouped by activity, and within the activities, organized into natural groupings.

Section 9 included one open-ended question asking participants to explain and give examples for their answer to whether they believed their overall English ability had improved. A similar procedure was followed to that above. In this case three categories were created at the outset: "little or no information" (allotted when either there was no answer provided, or the answer provided did not answer the question in a comprehensible way) "negative explanations" and "positive explanations". Section 10 included four open-ended questions for the comparison group and five for the experimental group. The responses on the open-ended questions provided explanations when needed.

3.9.2 Participant journals

Journals were written in both conditions in comparative weeks (weeks 2, 3, 6, 7, 8, 11 and 12). Some students did not write regularly even though they were given time

in class. Journals were examined for students' attitudes and feelings about the course, the field-of-study group work, their shyness, level of interest, as well as the use of computers and BBs in the experimental group.

3.9.3 Bulletin board (BB) data

The BB data are used descriptively to illustrate and explain various patterns in participants' work and conversations.

3.10 Summary

As stated in the introduction to Chapter 3, this study was designed to create a situation where optimal motivation and learning could occur. To this end, it followed a pre-questionnaire / post-questionnaire design which established that participants in the experimental group were equivalent to participants in the comparison group at the outset and assessed the participants' levels of motivation prior to and after the treatment through an examination of variables at the learning situation level, the learner level and the language level.

Chapter 4: Findings

4.1 Introduction

Both quantitative and qualitative data were collected in this study. Quantitative data included items from the pre- and post- questionnaires, final project marks and final marks. Both questionnaires asked participants to self-report on language habits, English ability, computer ability, academic learning style, learning preferences, and to rank the reasons they were studying English. In addition, the pre-questionnaire asked for descriptive information, such as age, sex and previous language experience.

Additional information gathered in the post-questionnaire was concerned with improvements in English ability due to group work in the comparison group and due to BB group work in the experimental group, and the usefulness of course activities and the group work aspect of the final project. Most items used a four-point Likert scale. Exceptions were the rankings and some of the group questions (which were answered with "yes" or "no").

Qualitative data included information from open-ended questions on the post-questionnaires (in the form of "please explain" your answer), information taken from the BB, participants' journals and teacher questionnaires. Due to the large amount of data gathered and some changes in questionnaire from pre- to post-, some items from the pre- and post-questionnaires were not analysed. These were pre-questionnaire sections 3 (previous language experience), 5 (comfort level), 7 a,b,e,g,j,o,p, q (learning style), equivalent post-questionnaire section 4 a,b,e,g,j,o,p, q and r, and post-questionnaire section 9 a,b and c (attitude towards the BB in the experimental condition

only). Items analysed were selected for their particular relevance to the three hypotheses of this study.[7]

4.2 Hypothesis #1: Using a BB will provide students with sufficient partners (at least one) in their fields of study to enable them to fulfil the field-of-study group work component of the course.

4.2.1 Analysis for hypothesis #1

Hypothesis #1 was addressed by looking at the number of participants in each program and determining a) how many of them would have been alone in their fields of study if all five classes had been working in the traditional way (with no BB to group them); b) how many of them would have been alone in their fields of study if all five classes had been using the BB; and finally, c) how many participants were alone in their fields of study within the experimental group of three classes combined into one for group work on the BB, and within the comparison group of two classes working separately in the traditional way.

The data in Tables 4 and 5 do not necessarily correspond to the numbers of participants completing the pre- and post-questionnaires, as they reflect the class lists, and count all participants in the experimental condition, regardless of whether or not they completed the questionnaires, or dropped the course after the official drop date.

Additionally, answers to post-questionnaire, section 10.b.1 and 10.b.2[8] (see Figure 15 for questions) were analysed to determine whether the grouping of

[7] Dörnyei (2001b) states that "a good questionnaire intentionally contains many more items than the number of actual motivational variables it focuses on." (p.212).

participants by BB worked as well in reality as in theory. Section 10.b.1 and 10.b.2 are each followed by an open-ended question in which the participants were asked to provide more explanation for their answers. These were examined qualitatively, as was information from the BB, which shows how the experimental groups formed and worked together. Unfortunately, the information from these two questions refers only to what happened in the final project, which was a more challenging assignment and fell at the end of term when students were busier with program-related work. They do not provide information about how the groups worked over the term, nor about whether or not the participants worked together on any of the other projects. This is a limitation of the questionnaire. To compensate for this, the data from the BB were examined. Item 10.b.1 was administered to the comparative group and the answers were further compared across conditions to the question (10.b.1 of the BB questionnaire was compared to 10.b of the comparison questionnaire).

Section 10. Please answer and explain.

b.1 Did you work with people from your field of study on your final project? *YES* *NO*

Please explain.

_____

b.2 Did you work with anyone from another class on your final project? *YES* *NO*

Please explain.

_____

Figure 15. Post-questionnaire (experimental group), questions 10.b.1 and 10.b.2.

[8] As explained in Chapter 3, a typographical error occurred in the BB questionnaire, namely two items were numbered 10.b. For analysis, they have been renumbered 10.b.1 and 10.b.2.

4.2.2 Results for hypothesis #1

First, participants' fields of studies were broken down into classes in a frequency chart (see Table 4 for the breakdown). If each of the five classes had been working in the traditional way, with field-of-study groups being formed within the class unit only, then 24 students (class 1: 7; class 2: 1; class 3: 7; class 4: 5 and class 5: 4), or 18.75 % of all students, would have worked alone or in groups with mixed fields of study (approximately 4 or 5 per class), while 104 students, or 81.25%, would have been able to work with at least one, if not more, partner in their same field of study.

Table 4

Fields of Study by Class

	3 Experimental Classes			2 Comparison Classes		
Field of Study	1	2	3	4	5	Total
Administration	3	2	1	6	1	13
Animation	1	1	0	1	0	3
Architecture	2	0	2	0	0	4
Crafts	1	0	0	0	0	1
Computer Science	0	0	1	0	0	1
Electronics	0	0	0	1	0	1
Early Childhood Education	1	0	0	0	1	2
Electrical Engineering	2	0	3	2	1	8
Graphic Design	6	0	0	0	0	6
Industrial Design	0	0	1	0	1	2
Interior Design	1	3	2	2	3	11
Leisure Studies	2	0	1	1	0	4
Mechanical Engineering	0	3	1	1	3	8
Music	1	0	0	2	0	3
Nursing	0	4	5	0	7	16
Photography	0	0	0	1	0	1
Social Work	1	0	1	0	3	5
Special Care Counselling	3	11	6	3	7	30
Presentation Design	0	0	1	4	3	8
Social Science	1	0	0	0	0	1
n	25	24	25	24	30	128

Note. Based on class lists after official drop date, not questionnaire data.

Next, participants were tabulated by field of study as if all five groups had had access to the BB for their group work. If all participants in the five classes had had access to the BB, only 5 participants overall, or 3.9%, would have been alone in their fields of study. These fields are Crafts (which is already a compilation of six different crafts), Computer Science, Electronics, Photography and Social Science[9].

Finally, the groupings of this study were analysed and participants' fields of study were examined by treatment (see Table 5). In the experimental group, if they had not been grouped by BB, 15 participants, or 20.27%, would have been alone in their fields of study (or would have had to work in groups with people from other fields of study), whereas with the use of the BB, only 7 participants, or 9.45% of the experimental group, were alone in their fields of study. In the comparison group, there were 9, or 16.66%, participants who worked alone or in groups with people from other fields of study.

[9] Social Science is not a technical program, but a pre-university program. This student was misclassified.

Table 5

Number of Participants per Field of Study Examined by Treatment

Field of Study	Experimental	Comparison	
	1.00	2.00	Total
Administration	6	7	13
Animation	2	1	3
Architecture	4		4
Crafts	1		1
Computer Science	1		1
Electronics		1	1
Early Childhood	1	1	2
Electrical Eng.	5	3	8
Graphic Design	6		6
Industrial Design	1	1	2
Interior Design	6	5	11
Leisure Studies	3	1	4
Mechanical Eng.	4	4	8
Music	1	2	3
Nursing	9	7	16
Photography		1	1
Social Work	2	3	5
Special Care C.	20	10	30
Presentation Des.	1	7	8
Social Science	1		1
n	74	54	128

Note. Based on class lists after official drop date, not questionnaire data.

Two questions from the post-questionnaire would seem to offer a more complete picture of the situation in terms specifically of the final project (Assignment #6). These questions offer participant self-reporting data. For instance, 10.b.1 (experimental group) and 10.b (comparison group) ask "Did you work with people from your field of

study on your final project?" It is a yes/no question with an additional open-ended "please explain" included. If we examine the frequency scores for no (.00) and yes (1.00) answers to this question by treatment, we see that the reality (what the participants say they did) does not match the theoretical picture given above.

Of the 58 experimental participants out of 60 who responded to this question, 14 stated that they did not work with people from their field of study on their final project. This does not mean that they did not work with people from their field of study on the other assignments. The question only looks at the final projects. This represents 24.13% of the experimental group, and is almost the same as the original number of participants in that group who were alone in their fields of study. It suggests that none of the students who were alone in their fields of study in the three individual classes took advantage of the BB to find field-of-study partners from the other classes within the experimental group (see Table 6). This finding will be explored in more depth in the next chapter.

In the comparison group, 41 of 46 participants responded, and 7 of these, representing 17.07% of the total, said that they did not work with people from their field of study on their final project.

Table 6

Frequency Scores for Post-Questionnaire, Section 10.b.1

Question: "Did you work with people from your field of study on your final project?"

Response	Experimental	Comparison	Total
No	14 (24%)	7 (17%)	21 (21%)
n	58	41	99

The other question which might shed some light on this issue is 10.b.2 "Did you work with anyone from another class on your final project?" from the post-questionnaire. This question was only asked in the experimental group and refers only to Assignment #6 (the final project). It cannot be generalized to the other five assignments. The frequency chart (see Table 7) shows that only 7 participants said yes. This represents 12% of the participants in the three experimental classes.

Table 7

Frequency Scores for Post-Questionnaire, Section 10.b.2

Question: "Did you work with anyone from another class on your final project?"

Response	Experimental
No	51 (88%)
Yes	7 (12%)
n	58

Finally, an examination of the BB shows that the majority of participants in the study communicated with people in their field of study and with people outside of their classroom on the BB for the assignments 1, 2, 3 and 5: introductions, field-of-study discussion and readings and the proposals. Participation was incomplete for the vocabulary assignment (Assignment 4). In terms of the final assignment (Assignment 6), use of the BB was almost reduced to nil. Half or more of each BB group voted, but few, if any, per group used the BB space for final project discussion once the decision of what project to undertake was made (see Table 8).

Table 8

Number of Participant Messages per BB Assignment

Field of study	Total messages	1. Intros	2. Discuss	3. Read	4. Vocab.	5. Proposals	6.a Vote	6.b Final discuss	Average #messages /student
Administration	116	7	5	5	5	5	5	3	23.2
Animation	35	2	1	2	2	1	2	1	17.5
Architecture	48	4	4	4	3	4	3	0	12
Crafts	10	2	3	1	0	0	0	0	5
Computer Science	0	0	0	0	0	0	0	0	0
Electronics	0	0	0	0	0	0	0	0	0
Early Childhood Education	6	2	0	0	0	0	0	0	3
Electrical Engineering	93	5	6	6	3	5	3	3	18.6
Fine Arts	49	1	2	5	3	3	3	3	16.33
Graphic Design	116	8	8	7	7	7	3	3	16.57
Industrial Design	2	1	1	0	0	0	0	0	2
Interior Design	91	6	7	7	7	6	5	3	15.16
Leisure Studies	82	0	4	3	2	3	3	3	27.33
Mechanical Engineering	42	4	4	4	3	2	1	0	14
Music	11	1	1	1	1	1	1	0	11
Nursing	101	13	11	10	8	8	5	3	11.22
Photography	0	0	0	0	0	0	0	0	0
Social Work	7	3	0	2	1	1	0	0	3.5
Special Care Counselling	207	18	14	12	17	17	13	3	18.81
Presentation Design	4	2	0	0	1	1	0	0	4
Social Science	0	0	0	0	0	0	0	0	0
n	1020	79	71	69	63	64	47	25	16.72

Note. Results are based on a rounded up average number of students. Data were taken directly from the BB.

These results show us that Hypothesis #1 was not confirmed. Using a bulletin board does not necessarily ensure that all participants will work with someone within their field of study. Nonetheless, there may be other positive consequences associated with this CMC tool, and these will be discussed in Chapter 5.

4.3 Hypothesis #2: Participants engaged in group tasks by BB virtually over the Internet will be more motivated than participants engaged in group tasks of a similar nature in a face-to-face situation.

To address Hypothesis #2 a different approach was needed. The two questionnaires were designed to elicit information about motivation. They contained more items than motivational variables in order to assure adequate coverage of each potential variable. To limit the number of variables which would be analysed, items were first clustered into multi-item scales, each focussing on a different target motivational influence, using a stepwise procedure specified by Dörnyei (2001b, p.212).

Hypothetical groupings of clusters were generated using Dörnyei's (1994) conceptual tripartite framework of L2 motivation[10] and following the research method he suggests (Dörnyei, 2001b, p.183-190), in which the target behavioural domain is defined, then the various motivational influences are listed, priorities among the relevant motivational influences are set up (p. 188), and finally, Cronbach alpha internal reliability testing is used for item analysis to judge the internal consistency of the groupings. Dörnyei (2001b) states that "Motivation, by definition, is related to action, and therefore motivational relevance can only be specified in the light of the target behavioural domain" (p.187). Thus, motivational criteria, or behavioural criterion variables, must be defined with both the motivation level and specific context in mind. The motivational components were operationalized in this thesis by taking a theoretically motivated combination of items from the questionnaires, and then

[10] His theories of motivation are based on research of EFL participants. It is reasonable to use this framework as a starting point with Quebec CEGEP students due to the "EFL" nature of ESL in Quebec (see Chapter 2.2.4).

analyzing them using Cronbach alpha internal reliability testing to form clusters of items which then became the 8 motivational variables. These variables were then compared from pre-questionnaire to post-questionnaire for both groups, and the two groups were compared to each other.

The five variables of extra-curricular language use, computer ability, preferences for group work, activity usefulness and self-reported learning, representing the course-specific motivational components of *interest, expectancy, relevance* and *satisfaction*, at the learning situation level (see Figure 4, Chapter 2), will be discussed first, in order to examine the motivation students have in the classroom and during the course. This will be followed by a discussion of the two variable of anxiety/shyness and English ability, representing *self-confidence* at the learner level, and of the variable of motivational orientation at the language level.

4.3.1 Analyses for course-specific motivational component: Interest (learning situation level)

The first motivational component to be assessed was interest, an intrinsic motive, related to a natural curiosity about our surroundings. Interest was operationalized by a multi-item scale on the pre-and post-questionnaires examining extra-curricular language use. The justification for this was that if students are interested in the course and the language, their interest will carry over outside of the classroom and manifest itself in uses of the language. If extra-curricular activity in English was reported as low on the pre-, for instance, this would indicate a low-interest motivational component at the outset of the course. If it were then to be reported higher on the post-, then

motivation, in terms of interest and enthusiasm for the course and the learning of the L2, would be seen to have improved during the course.

Variable 1, extra-curricular language use, was operationalized in the following way: First, the multi-item scale for interest contains five items on the pre-questionnaire and five items on the post-questionnaire (see Figures 16 and 17). These items were determined to have an internal consistency (Cronbach alpha) of .59 in the pre- and .73 in the post-. The pre- alpha score here is the lowest of all the reliabilities used for this thesis.

Section 4. How often do you...

a)	Watch TV or movies in English?	Never	Occasionally	Frequently	Always
b)	Listen to the radio in English?	Never	Occasionally	Frequently	Always
c)	Read in English?	Never	Occasionally	Frequently	Always
d)	Speak to friends in English?	Never	Occasionally	Frequently	Always
e)	Speak English at work?	Never	Occasionally	Frequently	Always

Figure 16. Pre-questionnaire, Section 4. Language habits.

Section 1. How often do you...

a)	Watch TV in English?	Never	Occasionally	Frequently	Always
b)	Watch movies in English?	Never	Occasionally	Frequently	Always
c)	Listen to the radio in English?	Never	Occasionally	Frequently	Always
d)	Read in English?	Never	Occasionally	Frequently	Always
e)	Speak socially in English?	Never	Occasionally	Frequently	Always
f)	Speak English at work?	Never	Occasionally	Frequently	Always

Figure 17. Post-questionnaire, Section 1. Language habits.

As can be seen in the Figures above, pre-questionnaire 4.a) was divided into two separate questions 1.a) and b) on the post-questionnaire. When Cronbach alpha internal reliability testing was undertaken on this multi-item scale, the higher score of 1. a) or b) was computed, rather than both. The justification for this was that if participants had watched more of one than another (for instance, more TV and fewer movies in English), they would likely have answered by giving the higher frequency related to TV at the pre-questionnaire. In this way, the behavioural criterion variable of "extra-curricular language use" was operationalized as Variable 1 and was used to examine the course-specific motivational component of participant interest in the course and in the L2, along with qualitative explanatory data.

Next, a repeated measures ANOVA was performed to compare Variable 1 pre- to post- and across conditions (one within and one between). This was done to determine whether there had been a change in amount of extra-curricular activity reported by the experimental group in relation to that reported by the comparison group after the treatment, which would show a higher level of motivation at the learning situation level in terms of interest in the course and in the L2.

4.3.2 Results for course-specific motivational component: Interest (learning situation level)

Variable 1: Extra-Curricular Language Use

The repeated measures ANOVA for Variable 1: Extra-curricular language use was not significant from pre-questionnaire to post-questionnaire (p=.037) nor was it significant between groups (p=.426). The mean score out of 3 for the experimental

group was 1.17 for the pre- and 1.22 on the post-. The mean score out of 3 for the comparison was 1.07 on the pre- and 1.19 on the post-. These numbers are not high. Interest in using English outside of the classroom can be said to have been low in both conditions at the outset of the course and neither condition raised it significantly. Therefore, motivation, as operationalized by the behavioural criterion Variable 1, did not increase significantly for either group.

4.3.3 Analyses of course-specific motivational component: Expectancy (learning situation level)

Expectancy was operationalized at the learning situation level by two multi-item scales on the pre-and post-questionnaires. The first was on self-reported computer ability, and the second was on preferences for working in groups. The justification for examining these areas was that at the beginning of the course, the students evaluate the course requirements and the expected degree of difficulty of the various tasks. They also judge the amount of effort required and their own familiarity with the task type. For instance, a low self-reported computer ability would suggest that the experimental group participants' motivation, in terms of their expectancy of success in the course at the outcome, would be low if, as in this study, the course obviously requires a certain amount of computer use. Likewise, a low preference for working in groups on the pre-questionnaire would suggest that that the comparison group student would have a low expectancy of success coming into a course like this which they can see involves a large amount of group work.

Variable 2, self-rated computer ability was operationalized as follows. The first multi-item scale contains eight items on the pre-questionnaire and the same eight items on the post-questionnaire (see Figures 18 and 19). The scale was analysed using Cronbach alpha internal reliability testing and determined to have a high internal consistency of .92 in the pre- and .91 in the post-.

	(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)			
Section 6. Rate your ability to...				
a) Use a simple computer program	1	2	3	4
b) Use the Internet	1	2	3	4
c) Use e-mail	1	2	3	4
d) Use an electronic bulletin board	1	2	3	4
e) Chat	1	2	3	4
f) Make a web site	1	2	3	4
g) Learn new computer skills	1	2	3	4
h) Relax while working on a computer	1	2	3	4

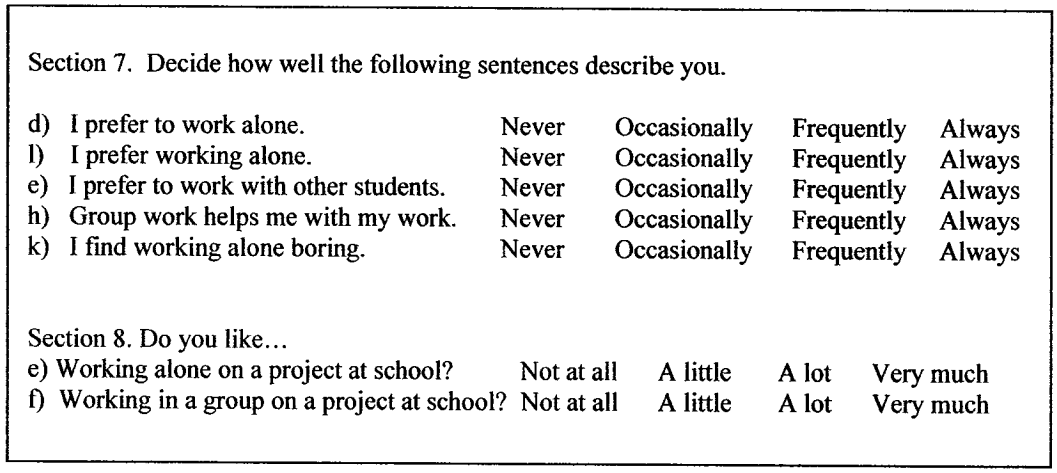
Figure 18. Pre-questionnaire, Section 6. Computer Ability.

	(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)			
Section 3. Rate your ability to...				
a) Use a simple computer program	1	2	3	4
b) Use the Internet	1	2	3	4
c) Use e-mail	1	2	3	4
d) Use an electronic bulletin board	1	2	3	4
e) Chat	1	2	3	4
f) Make a web site	1	2	3	4
g) Learn new computer skills	1	2	3	4
h) Relax while working on a computer	1	2	3	4

Figure 19. Post-questionnaire, Section 3. Computer Ability.

For Variable 3, preferences for group work, it was first necessary to reverse-mark certain items in the multi-item scale which had been negatively worded on the pre-: 7. d), l) and 8.e) and their counterparts on the post-: 4. d) and 6.e) for ease of comparison.

Then, this multi-item scale, which contains six items on the pre-questionnaire and six items on the post-questionnaire (see Figures 20 and 21) was analysed using Cronbach alpha internal reliability testing and determined to have an internal consistency of .76 in the pre- and .74 in the post-. In the pre-questionnaire, item 7.d) reads "I prefer to work alone". This was accidentally repeated in item 7.l) which reads "I prefer working alone." It was noted at the time of the testing, and all students were told that the two questions were the same. Thus, the answers on these two questions have been added and averaged. The error did not appear on the post-questionnaire.



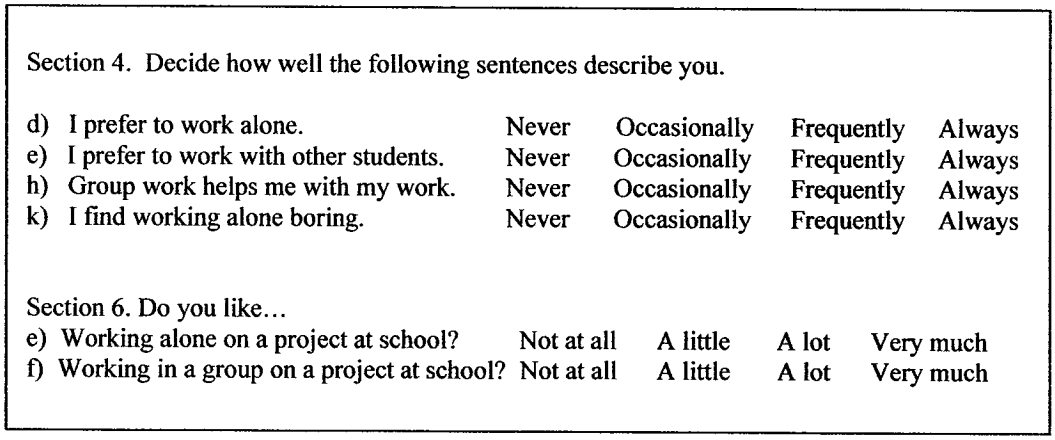
Section 7. Decide how well the following sentences describe you.

d) I prefer to work alone.	Never	Occasionally	Frequently	Always
l) I prefer working alone.	Never	Occasionally	Frequently	Always
e) I prefer to work with other students.	Never	Occasionally	Frequently	Always
h) Group work helps me with my work.	Never	Occasionally	Frequently	Always
k) I find working alone boring.	Never	Occasionally	Frequently	Always

Section 8. Do you like...

e) Working alone on a project at school?	Not at all	A little	A lot	Very much
f) Working in a group on a project at school?	Not at all	A little	A lot	Very much

Figure 20. Pre-questionnaire, Section 7. Academic style and Section 8. Preferences.



Section 4. Decide how well the following sentences describe you.

d) I prefer to work alone.	Never	Occasionally	Frequently	Always
e) I prefer to work with other students.	Never	Occasionally	Frequently	Always
h) Group work helps me with my work.	Never	Occasionally	Frequently	Always
k) I find working alone boring.	Never	Occasionally	Frequently	Always

Section 6. Do you like...

e) Working alone on a project at school?	Not at all	A little	A lot	Very much
f) Working in a group on a project at school?	Not at all	A little	A lot	Very much

Figure 21. Post-questionnaire, Section 4. Academic style and Section 6. Preferences.

In this way, the behavioural criterion variables of "computer ability" and "preference for group work" were operationalized as Variables 2 and 3 and were used to examine the course-specific motivational component of participant expectancy of success in the course, along with qualitative data from the BB, journals and post-questionnaire open-ended questions. Then, a repeated measures ANOVA was performed on the newly created variables to compare them pre- to post- and across conditions (one within and one between). This was done to determine whether or not the experimental group a) showed a high or low expectancy of success at the outset and b) changed their level of computer ability or group preference after the treatment in relation to the comparison group, which would show the experimental group's level of motivation at the learning situation level in terms of expectancy of success in the course.

4.3.4 Results for course-specific motivational component: Expectancy (learning situation level)

Variable 2: Computer Ability

The repeated measures ANOVA for Variable 2 was significant from pre-questionnaire to post-questionnaire (*p=.004). It was not, however, significant between groups (p=.429). Both the experimental and comparison groups reported small increases in their computer abilities from the beginning to the end of the course, but the experimental group, which spent time on computers in their English class, did not increase significantly more than the comparison group. The experimental group increased .10 from 2.85 on the pre- to 2.95 on the post- and the comparison group

increased .16 from 2.68 on the pre- to 2.84 on the post-. These scores, out of 3, show that both groups answered 2 = OK and 3 = Very good most often. Therefore, motivation, as operationalized by behavioural criterion Variable 2, could be considered to be mid to high throughout the course and also to have risen slightly from pre- to post-questionnaire.

Variable 3: Preferences for group work

The repeated measures ANOVA for Variable 3 was significant from pre-questionnaire to post-questionnaire (*p=.004). Again there was no significant between group difference (p=.508). In addition, in this case the significance from pre-questionnaire to post- lies in a decrease in participants' preference for group work. In the experimental group the mean out of 3 decreased from a pre- of 1.56 to a post- of 1.43. In the comparison group the mean decreased from a pre- of 1.56 to a post- of 1.47. The change was small, but in this case it seems to suggest that neither group was completely happy with the group work undertaken in class. Indeed, with pre-questionnaire responses for both groups hovering between a 0 (Never; Not at all) and a 1 (Occasionally; A little) for whether or not they prefer group work over working alone, these CEGEP students seemed predisposed to working alone. Therefore, motivation, as operationalized by behavioural criterion Variable 3, could be considered to be weak at the outset and may even have deteriorated further over the duration of the course.

4.3.5 Analyses for course-specific motivational component: Relevance (learning situation level)

Relevance was operationalized on the post- by a ranking of the usefulness of ten activities in the course and two open-ended questions related to this ranking. Several open-ended items on the post delved into participants' thoughts on the field-of-study group work, and for the experimental participants additionally probed their feelings about the BB. There was no equivalent on the pre-questionnaire to the post-questionnaire item which asked participants to rank ten activities in terms of their usefulness. All listed activities are equivalent for the experimental and comparison conditions (see Figure 22). Certain of the activities were undertaken on the BB by the experimental group, while others were done in class. All were done in class by the comparison group.

Section 8. Ranking.

a) Which of the class activities did you prefer? Rank the following activities from 1 to 10 (In other words, give each one a different number: 1 is for the activity you found the most useful and 10 is for the activity you found the least useful.)

_____ the personal journal writing
_____ the listening exercises
_____ speaking in small groups in class
_____ working in groups
_____ the field-of-study final project
_____ the resumé and cover letter project
_____ the dictionary work
_____ the reading selection work
_____ the job interview role play
_____ the grammar exercises

b) Which activity did you rank number one? Why?

_____

c) Which activity did you rank number ten? Why?

_____

Figure 22. Post-questionnaire, Section 8. Ranking of activities.

Variable 4, activity usefulness, was operationalized in the following manner: First, frequencies were tabulated for each of the ten items of variable 4 and then Tables 15-18 (in Appendix 8) were created to explain participants' number one (most useful) and number ten (least useful) rankings of the course activities. Then, a qualitative analysis of the response to open-ended questions *8.b) Which activity did you rank number one? Why?* and *8.c) Which item did you rank number ten? Why?* was performed in a grounded manner, without imposing any predetermined categories on the data. The responses were listed in the participants' own descriptive phrases. Then, positive responses and negative responses, 8.b) and 8.c) respectively, were

systematically grouped into two categories under each activity. Finally, responses that seemed to run to a common theme were clustered. If a participant failed to respond, or responded in an incoherent way, their response was place in an additional category: No response.

Next, activities which were ranked number one and ten most frequently were examined in terms of what response categories they initiated. Thus, the behavioural criterion variable "activity usefulness" which included 10 items on the post-questionnaire (post-questionnaire, section 8) became Variable 4 and was used to examine the course-specific motivational component of relevance of the course to participant's needs and goals, along with qualitative explanatory data taken from the open-ended questions on the post- 8.b) and c) and qualitative data from the journals and the BB.

4.3.6 Results for course-specific motivational component: Relevance (learning situation level)

Variable 4: Activity usefulness

Section 8 of the post-questionnaire is examined below in a different way from the data above. These data, involving a ranking of activities which were performed during the course in order of usefulness, provide information about what motivated the students. Table 9 shows the number of responses given for first and tenth rankings to each activity in each condition. Six of the ten activities show that participant responses which tend to be similar across conditions. However, four of the activities, the personal journal writing, the working in groups activity (which was exclusively done on the BB

in the experimental group and in class in the comparison group), the field-of-study final project, and the job interview role play, show a trend towards very different responses across conditions. For example, whereas 25% of experimental participants ranked the journal writing 10th, twice as many comparison participants did so, at 51% and whereas 22% of the experimental participants ranked the final project last, only 2% of comparison participants did.

Table 9

Top and Bottom Rankings of Activities in Terms of Usefulness by Experimental and Comparison Treatments

Section #8 Post-Questionnaire	Experimental participants n=59 (except: c), d), & g) n=58)		Comparison participants n=43	
Activity	Ranked it 1st	Ranked it 10th	Ranked it 1st	Ranked it 10th
a) the personal journal writing	3 (5.08%)	15 (25.42%)	2 (4.65%0	22 (51.16%)
b) the listening exercises	5 (8.47%)	1 (1.69%)	7 (16.27%)	0
c) speaking in small groups in class	5 (8.62%)	3 (5.17%)	8 (18.60%)	0
d) working in groups	9 (15.51%)	1 (1.72%)	2 (4.65%)	1 (2.32%)
e) the field-of-study final project	4 (6.77%)	13 (22.03%)	5 (11.62%)	1 (2.32%)
f) the resumé and cover letter	9 (15.25%)	5 (8.47%)	9 (2.09%)	2 (4.65%)
g) the dictionary work	1 (1.72%)	2 (3.44%)	0	4 (9.30%)
h) the reading selection work	2 (3.38%)	2 (3.38%)	2 (4.65%)	2 (4.65%)
i) the job interview role play	10 (16.94%)	2 (3.38%)	1 (2.32%)	3 (6.97%)
j) the grammar exercises	12 (20.33%)	13 (22.03%)	7 (16.27%)	8 (18.60%)

Note. Data from Post-Questionnaire, Section 8.

A further analysis of the open-ended questions which followed the ranking, and asked the participants to explain their first and tenth rankings, suggests that although the question specifically asked participants to rank in order of usefulness, and it was expected that they would respond in terms of how useful they found these activities, not all of the participants' reasons appeared to be about relevance or use. Other fairly distinct and revealing categories emerged from the data. Participants in both conditions ranked with other criteria in mind, such as level of enjoyment or the amount of stress induced, rather than usefulness. This can be seen very clearly through an examination of the response categories which emerged from the participant responses to the open-ended questions which followed the ranking question in the post-questionnaire (see Table 10).

Table 10

Response categories for qualitative data: Post-questionnaire, Section 8. b) and c) open-ended questions.

Categories	Positive responses 8. b)	Negative responses 8. c)
Interest	It's fun/funny It's interesting It's interactive	Boring It's too easy It's not fun/funny It's repetitive
Relevance	It's useful It's a real situation (authentic) It's relevant to my future I need it It's important We didn't write enough	It's not useful It's not important It's unnecessary Wanted something else Overdose! We did it too much
Expectancy / Causal attribution: Ability (Beliefs)	It helps me learn I learn more this way It motivated me It improves my (speaking, writing, listening, etc.) I'm good at it It's my better ability	I'm bad at it I'm poor at it
Satisfaction	Got feedback It was relaxed Improvement noted: It helped my (reading, etc) It's easy	No feedback I was alone (in field) No one was serious People spoke French Too hard
External stress		No time/schedules Too many final projects across courses
Task stress		Too much work Unclear instructions Confused
Shyness		I'm shy
Choice/autonomy	I liked having choice Choosing my topic myself	Give me a topic I don't know what to say/write
Social orientation	I discover new people We help each other I'm social I exchanged with friends	I was alone in my field of study
Integrative orientation	I love it I like it	I hate it I don't like it
Effort /Causal Attribution: Effort		Tired / end of class I didn't do it / I forgot
No response	-	-

Some responses did relate directly to relevance and included these positive comments from both conditions: "It's useful"; "It's a real situation"; "It's relevant to my future"; "I need it"; "It's important"; and "We didn't write enough". There were also comments which clearly showed that some participants in each condition did not find certain activities relevant, such as: "It's not useful"; "It's not important"; "It's unnecessary"; "I wanted something else"; "Overdose!"; and "We did it too much". Of the ten experimental participants who ranked the job interview activity to be their number one choice, four held positive relevance to be a factor, whereas the one comparison participant who chose this activity as number one did not give relevance as the reason (see Table 17, Appendix 8).

Other activities for which participants gave responses showing positive relevance were the resumé and cover letter, the grammar exercises and the field-of-study project. Activities which received responses showing negative relevance were the journal writing and the field-of-study project (see again Table 9). The experimental participants ranked the field-of-study project 10^{th} thirteen times (twice for negative relevance) to the comparison condition's once (see Table 18, Appendix 8). Other responses given by both conditions did not relate to relevance, but rather to task preferences and these categories will be examined in more depth in Chapter 5.

4.3.7 Analyses of course-specific motivational component: Satisfaction (learning situation level)

Satisfaction was operationalized by a fourth multi-item scale of self-reported learning found only on the post-questionnaire (see Figure 23 below). This became

Variable 5, operationalized through seven items, which were intended to find out whether learners perceived their learning to have improved by doing the group projects (for the comparison condition) and by using the BB to do projects (for the experimental condition). There was no equivalent on the pre-questionnaire to the post-questionnaire data. The open-ended question asked after 9.d) related to overall English ability and was analysed qualitatively.

Section 9. Circle the information that best reflects how you feel.

d) My overall English ability has _____ by using the bulletin board to do projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

Please explain your answer and include examples.

_____

e) My English vocabulary has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

f) My English writing has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

g) My English reading has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

h) My English speaking has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

i) My English listening ability has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

j) My English grammar has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

Figure 23. Post-questionnaire, Section 9. Self-reported learning.

This multi-item scale was first analysed using Cronbach alpha internal reliability testing and determined to have an internal consistency of .86. Next, a *t*-test was performed to compare variable 5 on the post- and across conditions. A significant difference between the participants in the experimental group in relation to the

comparison group would provide answers in terms of their level of motivation at the learning situation level, as well as determining a higher level of achievement for Hypothesis #3, which is discussed in a later section.

4.3.8 Results for course-specific motivational component: Satisfaction (learning situation level)

Variable 5: Self-reported learning

The *t*-test for Variable 5, which was based on a grouping of questions from the post-questionnaire about whether or not participants believed their English had improved or not, overall and specifically in terms of vocabulary, reading, writing, speaking, listening, and grammar, revealed no significant differences between groups (p=.83). Thus, it appears that levels of satisfaction were not significantly different from one condition to the other. In the experimental condition the participants were specifically asked if their overall English ability, vocabulary, writing, reading, speaking, listening and grammar have improved or not by using the bulletin board to do projects, whereas in the comparison treatment they were asked about the same skills, related to the group projects.

Although there was no between group significant difference, the majority of participants in both conditions do report improvement. Question 9.d), reads as follows in the experimental condition:

My overall English ability has _____ by using the bulletin board to do projects.

and as follows in the comparison condition:

My overall English ability has _____ by doing the group projects.

In response to this question, the majority of experimental participants, 44 out of 59 (74.57%) reported improvement. Similarly, the majority of comparison participants, 36 out of 40 (90%) reported improvement. The responses to the open-ended question which followed will be discussed in Chapter 5.

4.3.9 Analyses of motivational component: Self-confidence (learner level)

Learners also carry certain more stable motivations into the classroom with them. Thus, if one of these variables from the learner level is very negative for example, it could override a positive motivational component at another level, such as the learning situation level (Dörnyei, 2001b). In order to sample motivation at Dörnyei's second level of his tripartite model, the learner level, the motivational component of self-confidence was examined. Self-confidence was operationalized with two variables: anxiety /shyness and self-reported English ability, based on Clément and Kruidenier's (1985) definition of self-confidence. These are also two of Bandura's (1993) four factors of self-efficacy. They were included in this study, whereas the other two factors of vicarious learning and encouragement from others were not. The last two factors depend to some extent or other on the influence of others around the learner and thus seem to cross over into the Teacher-Specific Components and Group-Specific Components of the Learning Situation Level (see Figure 4 in Chapter 2). The decision in this study was to examine the learning situation level exclusively through the four Course-Specific Motivational Components discussed above.

The first multi-item scale is of anxiety/shyness and consists of four items on the pre-questionnaire and the same four items on the post-questionnaire (see Figures 24 and 25). The anxiety/shyness scale was analysed using Cronbach alpha internal

reliability testing and determined to have an internal consistency of .79 in the pre- and .76 in the post-.

Section 7. Decide how well the following sentences describe you.				
i) I am uncertain when I have to speak English.	Never	Occasionally	Frequently	Always
m) I am shy.	Never	Occasionally	Frequently	Always
n) I feel very anxious when speaking English.	Never	Occasionally	Frequently	Always
p) English classes make me nervous.	Never	Occasionally	Frequently	Always

Figure 24. Pre-questionnaire, Section 7. Learning Style.

Section 4. Decide how well the following sentences describe you.				
i) I am uncertain when I have to speak English.	Never	Occasionally	Frequently	Always
m) I am shy.	Never	Occasionally	Frequently	Always
n) I feel very anxious when speaking English.	Never	Occasionally	Frequently	Always
p) English classes make me nervous.	Never	Occasionally	Frequently	Always

Figure 25. Post-questionnaire, Section 4. Learning Style.

The second multi-item scale is of self-reported English ability and consists of 9 items on the pre-questionnaire (for pre-questionnaire, sections 5. a) – h) and 7.c), see Figure 26) and 9 items on the post-questionnaire (for post-questionnaire, sections 2. a) – i) and 4.c), see Figure 27). Self-reported English ability was analysed using Cronbach alpha internal reliability testing and determined to have an internal consistency of .75 in the pre- and .77 in the post-. The justification for this second variable is that it measures participants' self-confidence in terms of causal attribution and self-efficacy (expectancy at a more general level according to Dörnyei, 1994).

(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)

Section 5. Rate your ability to...

a)	Read in English	1	2	3	4
b)	Write letters in English	1	2	3	4
c)	Write an essay in English	1	2	3	4
d)	Speak English to classmates	1	2	3	4
e)	Speak English in social situations (i.e. at a party)	1	2	3	4
f)	Use English on the job	1	2	3	4
g)	Use correct English grammar	1	2	3	4
h)	Relax while speaking English	1	2	3	4
i)	Learn English well	1	2	3	4
j)	Pass this English class	1	2	3	4

Section 7. Decide how well the following sentences describe you.

c) I do well in English classes. Never Occasionally Frequently Always

Figure 26. Pre-questionnaire, Section 5. English Ability and Section 7.c).[11]

(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)

Section 2. Rate your ability to...

a)	Read newspapers & magazines in English	1	2	3	4
b)	Read books in English	1	2	3	4
c)	Write letters in English	1	2	3	4
d)	Write an essay in English	1	2	3	4
e)	Speak English to classmates	1	2	3	4
f)	Speak English in social situations (i.e. at a party)	1	2	3	4
g)	Use English on the job	1	2	3	4
h)	Use correct English grammar	1	2	3	4
i)	Relax while speaking English	1	2	3	4
j)	Do well in English class.	1	2	3	4

Section 4. Decide how well the following sentences describe you.

c) I do well in English classes. Never Occasionally Frequently Always

Figure 27. Post-questionnaire, Section 2. English Ability and Section 4.c).

As can be seen in Figures 26 and 27, pre-questionnaire 5.a) was divided into two separate questions 2.a) and b) on the post-questionnaire. When Cronbach alpha internal reliability testing was undertaken on this multi-item scale, the higher score of 2. a) or b)

[11] Pre- 5. i) and j) were not used, nor was post- 2 j). They are not comparable, and thus were excluded from the analysis. Also, on the post- 4.c) repeats 2.j).

was computed, rather than both. The justification for this is the same as for Variable 1 above, that if participants had rated their ability to read one type of material higher than another, they would likely answer by giving the higher estimate of their ability, which would adequately reflect the answers given on 5.a).

Thus, the behavioural criterion variables of ""Anxiety /shyness" and "English ability" were operationalized as Variables 6 and 7 and were used to examine the learner level motivational component of self-confidence. Then, a repeated measures AN0VA was performed on the newly created variables to compare them pre- to post- and across conditions (one within and one between). This was done to determine whether or not the experimental group a) showed a high or low level of self-confidence at the outset and b) whether there had been a change in their level after the treatment in relation to the comparison group.

4.3.10 Results for motivational component: Self-confidence (learner level)

Variable 6: Anxiety/shyness

The repeated measures ANOVA for Variable 6 was not significant from pre- to post- (p=.067) or between groups (p=.930). Thus, the anxiety/shyness level in the groups was similar and did not change over time for either group, confirming that this is a more stable trait. On the pre-questionnaire, experimental participants had a mean score out of 3 of 1.67 and comparison participants a mean of 1.69. On the post-questionnaire, their mean scores were 1.76 and 1.77 respectively. This suggests that the participants of this study were moderately anxious and shy, but not overly so.

Variable 7: English Ability

The repeated measures ANOVA of for Variable 7 was not significant from pre-questionnaire to post-questionnaire (p=.033), nor was it significant between groups (p=.378). Their scores, in the 2 of 3 range, suggest that they held some confidence in their linguistic abilities at the outset and that this had not changed at the time of the post-test.

4.3.11 Analyses of motivational component: Motivational orientation (language level)

Masgoret and Gardner (2003) caution that "Orientations do not necessarily reflect motivation" (p.175). In other words, one can be oriented favourably towards the target culture and community, and thus have a high integrative orientation, yet still exhibit low levels of motivation due to other factors, such as a low level of self-confidence. Nevertheless, it was decided that it was important to sample motivation at the language level by determining which motivational orientations were most prevalent in each of the conditions.

In order to determine the motivational orientations of the learners in the two conditions, the participants' responses to the ranking question on the pre-questionnaire, Section 9, which read: "*What is the reason you are studying English right now?*" were analyzed. Participants were asked to rank the ten sentences which followed in order of importance, with one being for the first and most important reason. A ten-item scale from the pre-questionnaire (see Figure 28) was first computed for frequencies. Items were grouped according to orientations found by Clément and Kruidenier (1983) and

Clément et al. (1994) into four orientations: Instrumental, Integrative/Xenophillic (which includes travel and friendship), Knowledge and Culture, and English Media.

Results were calculated based on the frequency with which the two conditions ranked the items in the top three. This became behavioural criterion Variable 8.[12]

Section 9. What is the reason you are studying English right now?

Rank the following sentences from 1 to 10 (In other words, **give each one a different number**: 1 is for your first and most important reason and 10 is for your last and least important reason.) **Do not use a number more than once.**

- I am studying English because…
  - a) _____ It is compulsory to my program (I have to).
  - b) _____ I like it.
  - c) _____ I think it will help me get a good job.
  - d) _____ I want to be able to speak or write it better.
  - e) _____ I want to be able to understand English movies or TV shows.
  - f) _____ I need it in my job.
  - g) _____ I want to be able to understand English music.
  - h) _____ I want to learn more about the English culture and people.
  - i) _____ I want to travel.
  - j) _____ I want to be able to make friends with English people.

Figure 28. Pre-questionnaire, Section 9. Reasons for studying English.

4.3.12 Results for motivational component: Motivational orientation (language level)

Variable 8: Motivational orientation

Almost half of the participants in both conditions came into the course choosing instrumental reasons as their top three choices for taking the course (42.37% in the

[12] The post-questionnaire data for this question were not computed for two reasons. Firstly, certain of the items on the post were changed. Thus the pre- and post-data are not comparable. Secondly, it was not considered as necessary due to the fact that orientations are generally more stable over time, and likely would not have been affected by a short, fifteen-week course.

experimental and 46.82% in the comparison group). This gave them an externally regulated, instrumental orientation. Integrative, or Xenophillic reasons (friendship), accounted for a little more than a quarter of the top three responses (28.24% in the experimental and 25.39% in the comparison group). Knowledge and Culture was also an important reason with an additional quarter of the responses from both conditions (23.16% in the experimental and 22.22% in the comparison group). Finally, English Media, or a desire to access English media, had 6.21% and 5.55% respectively (see Figure 29 for these results).

	Column 1	Column 2
Motivational orientation	**Experimental n=177 (59x3)**	**Comparison n=126 (42x3)**
1. Instrumental a) It is compulsory to my program (I have to). c) I think it will help me get a good job. f) I need it in my job.	75 (42.37%)	59 (46.82%)
2. Integrative (Xenophillic) b) I like it. i) I want to travel. j) I want to be able to make friends with English people.	50 (28.24%)	32 (25.39%)
3.Knowledge & Culture d) I want to be able to speak or write it better. h) I want to learn more about the English culture and people.	41 (23.16%)	28 (22.22%)
4. English Media e) I want to be able to understand English movies or TV shows. g) I want to be able to understand English music.	11 (6.21%)	7 (5.55%)

Figure 29. Pre-Questionnaire, Section 9. Motivational Orientations.

Figure 30 summarizes the findings that have been presented above. Hypothesis #2 was not confirmed. Participants in both conditions showed similar levels of motivation at the outset and the conclusion of the study. State motivation, as measured by the four situation-specific motivational components, showed some small, but significant,

increases in terms of participant expectancy (computer ability) and satisfaction. No significant increase was seen in interest, or in expectancy (preferences for group work) [13]. A trend toward differences between the two conditions appeared with an examination of relevance. For example, over 15% of participants in the experimental condition preferred group work and almost 17% preferred job interviews, whereas less than 5% and 3% respectively of the participants in the comparison condition preferred these tasks. Additionally, stress was higher in the experimental group for the final assignment.

Trait motivation, as measured by the learner level motivational component of self-confidence showed no significant increase, nor was it expected to. Anxiety/shyness was moderate and linguistic self-confidence was mid to high throughout the course. Finally, almost half the participants in both conditions reported an instrumental orientation among their top three choices for taking the course (see Figure 30).

[13] Group work preferences, one of the two variables operationalizing motivation in terms of expectancy, showed decreases from pre- to post- for both conditions.

Variables		*Experimental*		*Comparison*	
		Pre-	***Post-***	***Pre-***	***Post-***
SITUATION - SPECIFIC LEVEL	**1. Interest** Extra-curricular language use	LOW (0 - 1)	NO SIGNIFICANT INCREASE	LOW (0 - 1)	NO SIGNIFICANT INCREASE
	2. Expectancy Self-reported computer ability	MID-HIGH (2 - 3)	SIGNIFICANT INCREASE	MID-HIGH (2 - 3)	SIGNIFICANT INCREASE
	3. Expectancy Preferences for group work	VERY LOW (0)	SIGNIFICANT DECREASE	VERY LOW (0)	SIGNIFICANT DECREASE
	4. Relevance Rating of useful activities	-	#1: GROUP WORK (16%) JOB INTERVIEWS (17%) #10: JOURNALS (25%) FINAL PROJECT (22%)	-	#1: GROUP WORK (5%) JOB INTERVIEWS (2%) #10: JOURNALS (51%) FINAL PROJECT (2%)
	5. Satisfaction Self-reported learning	-	SMALL IMPROVEMENTS	-	SMALL IMPROVEMENTS
LEARNER LEVEL	**6. Self confidence** Anxiety/shyness	MODERATE (1-2)	NO SIGNIFICANT INCREASE	MODERATE (1-2)	NO SIGNIFICANT INCREASE
	7. Self-confidence Self-reported English ability	MID-HIGH (2 - 3)	NO SIGNIFICANT INCREASE	MID-HIGH (2 - 3)	NO SIGNIFICANT INCREASE
LANGUAGE LEVEL	**8. Motivational orientation**	ALMOST HALF SHOW AN INSTRUMENTAL ORIENTATION IN THEIR TOP THREE CHOICES	-	ALMOST HALF SHOW AN INSTRUMENTAL ORIENTATION IN THEIR TOP THREE CHOICES	-

Figure 30. Summary of Results for all Variables.

4.4 Hypothesis #3: Participants engaged in group tasks by BB virtually over the Internet will do better on their final field-of-study project, and in the course overall, than participants engaged in group tasks of a similar nature in a face-to-face situation. (The learning outcome for the experimental participants will be higher.)

4.4.1 Analysis for hypothesis #3

Hypothesis #3 was addressed by examining the measurable behavioural criterion variable of achievement, which was operationalized as the final mark in the course (see Appendix 2: Summative Evaluation) and the final mark on the field-of-study project (see Appendix 3). Two *t*-tests were performed on final course marks and final project marks to compare them between conditions.

Additionally, participant data from section 9 on the post-questionnaire were analyzed in terms of self-reported achievement levels (see analyses for the motivational variable of satisfaction under hypothesis 2). Participants were asked, in seven separate questions on the post-questionnaire, whether or not the levels of their overall English ability, vocabulary, writing, reading, speaking, listening and grammar had "not improved at all"; "improved a little"; "improved quite a bit"; or "improved a lot" by using the bulletin board to do group projects (experimental group) or by doing the group projects (comparison). These seven questions provide information on participants' perceived achievement in English with regards to the aspect of the course that focussed on the projects (either face-to-face group work or BB group work). They also provide information on the participants' motivation (for hypothesis #2) in the last part of the course in terms of their levels of satisfaction in the course.

These seven discreet items were then analysed with Cronbach alpha internal reliability testing to judge their internal consistency as a multi-item scale. The alpha was .86 which suggests that these items have a high internal consistency. In fact, their internal consistency is higher when they are grouped together than it would be if any one of them were to be removed. Finally, the results for each group were compared using a *t*-test.

4.4.2 Results for hypothesis #3

The *t*-test results were not significant for the final course marks (p=.35) (see Table 11) or for the final project marks (p=.68) (see Table 12).

Table 11

Final Course Marks t- test

Condition	**n**	**Mean**	**Standard Deviation**	**Standard Error Mean**
Experimental	60	75.4000	9.76191	1.26026
Comparison	46	77.0870	8.72245	1.28606

Note. n = 106.

p=.35, two-tailed

Table 12

Final Project Marks t- test

Condition	n	Mean	Standard Deviation	Standard Error Mean
Experimental	60	7.2250	2.31690	.29911
Comparison	46	7.0326	2.38608	.35181

Note. n = 106. p=.68, two-tailed

The *t*-test result was also not significant for the self-reported achievement levels. The two groups were almost identical in response. There was no significant difference between the experimental and comparison groups (p=.83) (see Table 13). Hypothesis #3 was not confirmed.

Table 13

Self-Reported Learning t- test

Condition	n	Mean	Standard Deviation	Standard Error Mean
Experimental	60	1.1597	.61649	.07959
Comparison	46	1.1863	.66955	.09872

Note. n = 106. p=.83, two-tailed

4.5 Summary

The findings do not support the three hypotheses of this study. There were, however, findings which are of value to teachers and researchers alike which will be further discussed in Chapter 5, where the results will be related to the hypotheses.

Chapter 5: Discussion and Conclusion

5.1 Introduction

The objective of this quasi-experimental study was to explore potential solutions to two problems facing ESL CEGEP teachers in B-Block classes today:

1. Teachers, who are required to have a field of study component in their course plan, often place students in groups for field-of-study project work. Yet each class can potentially contain students from fifteen or more fields of study, with many students finding themselves to be the only representatives from their programs.
2. Many CEGEP students lack motivation for learning a second language, which can affect their ability to achieve a successful learning outcome.

Three hypotheses were tested within an intermediate course for students in the technical stream, using a pre-questionnaire / post-questionnaire design, with additional quantitative and qualitative findings from marks, data on the BB and participant journals. The goal of this chapter is to relate the results to the hypotheses. Then, recommendations will be made based on the findings, taking into account the limitations of the study. Suggestions for future research and pedagogical implications will also be discussed. Finally, a conclusion of the key findings and their implications will be presented.

5.2 Discussion of the Results for Hypothesis #1 and their Significance

Results did not confirm Hypothesis #1, that "*Using a BB will provide students with sufficient partners (at least one) in their fields of study to enable them to fulfil the field-of-study group work component of the course*". Using the CMC bulletin board

tool does not necessarily provide partners for all participants in their fields of study. Issues, such as time constraints and scheduling conflicts, were in some cases lessened by the use of the BB, and in some cases heightened. However, many students who did work with someone in their field of study from another class would not have had the opportunity otherwise.

Sixty-five participants out of the seventy-five experimental participants who completed the course (passed or failed) participated regularly on the BB for the first three of the four summative assignments: Assignments 3, 4 and 5 (see again Table 2). Fully 58 students worked in a group with one student or more from another class during this time, and 20 of these students worked with at least one student who was from another class who was in the same field of study as they were.

5.2.1 Reduction of isolation by field of study

To determine how many of the participants had at least one partner within their own field of study, an examination of the response to question 10.b.1 was undertaken. Responses by experimental participants, who were asked if they had worked with someone in their field of study for their final project, indicated that 14 of them said "no". Recall that seven of these did not have anyone in their field of study across the three classes. These participants worked in groups with mixed fields of study. The other 7 students who said "no" actually could have worked in field-of-study groups on their final project, yet did not.

In order to determine the exact picture in the experimental group, a more fine-grained look was taken at the participants who would have been alone if there had been

no BB, but who should, in this study, have been able to find at least one partner within their own fields of study on the BB (see again Table 4). If we look at Table 14, we note that there were 15 lone participants at the outset of the course in the experimental group.

Table 14

Fields Of Study Containing A Lone Student In At Least One Of The Three Experimental Groups.

Fields of study containing a lone student in at least one of the three experimental groups	Number of lone students at outset	Total number of students in the Field across all three classes	Was it theoretically possible for the lone students to work with another in same field by BB?	BB data: Did the lone students actually work with another in same field of study by BB?
Administration	1	6	Yes	Yes
Animation	2	2	Yes	Yes
Crafts	1	1	No	No
Computer Science	1	1	No	No
Early Childhood Ed.	1	1	No	No
Industrial Design	1	1	No	No
Interior Design	1	6	Yes	Yes
Leisure Studies	1	3	Yes	Yes
Mechanical Eng.	1	4	Yes	Yes
Music	1	1	No	No
Social Work	2	2	Yes	No
Presentation Design	1	1	No	No
Social Science	1	1	No	No
n	15	30	8 Yes, 7 No	6 Yes, 9 No

Of these fifteen participants who were alone in their fields of study within their classrooms, eight had the possibility of working with others in their fields on the BB. Six of these did indeed work successfully in small groups in their fields of study. An example of their on-line group work can be seen in an examination of the Animation forum which was chosen to illustrate typical conversations that were found throughout

the forums, all of which were analysed in detail. There was 1 participant each in classes 1 and 2 and none in class 3. Under normal circumstances these two participants would never have had the opportunity to work together in English. They would have had to work alone, or possibly with students from different fields of study. The BB data shows in their introductions that that they quickly realised that they knew each other, and indeed, had other, program-related, courses together (see Figure 31 in Appendix 7: BB data from the Animation forum: Introductions).

5.2.2 Potential for meaningful communication

BB data from the Animation forum's jigsaw reading assignment clearly illustrates that these two participants were working together. In addition, although the discussion begins with a monologic-type of writing, it progresses towards a conversational-type of message toward the end (Lamy and Goodfellow, 1999):

> By the way i'd like to thank you for the talk that we've got last friday in the anatomy course. It's good to know I'm not alone thining that kind of things. If you dont remember it doesnt matter because I do remember. Well, tata!!!
>
> (See this in context in Figure 32 in Appendix 7.)

These two participants did their final project together and were graded on it by both teachers. One of the marks given was a mark on group cohesion. They received a 4.25/5, meaning that all parts of their final project were well-integrated together. They did not overlap, nor did they leave out pertinent or necessary information. Their work showed that they had spent time cooperating together to prepare it. It was a successful and interesting project with final marks of 9.25/10 for one member and 8.5/10 for the other (for marking criteria see Appendix 3).

5.2.3 Challenges

It is clear from the Animation forum's last two assignments, the proposals and the final projects, that these Animation students were meeting and talking outside of class by this time to complete their work (see Figures 33 & 34, Appendix 7: BB data from the Animation forum: Proposals & Vote respectively). The BB has served its purpose in grouping them together. They seem to use it only as a backup or afterthought at this point. In fact, the final message, on the final project page is sent as much so that they can inform the teachers of what they are doing, as to communicate with each other (see Figure 35: BB data from the Animation Forum: Final Project in Appendix 7). Thus it is clear that some students knew each other from their program-related classes, and once contact was made by BB, they met and spoke off the BB, some of them even exchanging phone numbers and e-mail addresses. However, others communicated almost exclusively by BB and did well.

Although six of the fifteen who would have been alone in their fields of study if not for the experimental condition worked with others in their fields, the other nine participants in the experimental group did not. Seven of these were alone in their fields across all three classes and thus did not have this opportunity. The two other students, from Social Work, who could have worked together did try to briefly, but they did not continue after the introductions.

In addition, others in the experimental condition had trouble negotiating the BB, or simply did not wish to. This created situations where groups broke down, and some participants who could have worked in field of study groups did not. Thus, of the 14 who answered "No", that they did not work with someone from their field of study on

the final project, only 7 of them were actually alone in their fields of study across all three classes. The other 7 students who said no could have worked in field of study groups on their final project, yet did not. A look at the qualitative "Please explain." which followed question 10.b.1 shows that they seem to have had a variety of reasons.

The first is related to the number of final projects due at the end of the session, especially in their program-related courses. Several students made comments like the following, even though the projects were assigned in week ten and the final deadline was extended to week fifteen: "No. No time to see them, overload for final DEC!" and "We do not have the TIME to do it.".

Other students answered: "I wanted to do it alone." Although students were told that this was a group project and they were expected to collaborate on an idea and then divide up the work, a few students simply did their projects alone anyway, without asking in advance and then presented them as a "fait accompli". These projects were accepted by the teachers but marked down for not being done in a group (Appendix 3). Another reason stemmed from poor team functioning and can be seen in this student's comment: "Misunderstood between teamwork." Finally, the two comments below suggest that the walls of the classroom are a strong force to be reckoned with: "We was six in the same class." and "No. They are not in my group (class?)". In both of these cases the participants had a choice of working with people within their class or out of their class by BB. In both cases they worked exclusively with those in their own class.

In the comparison condition seven participants said they did not work with someone in their field of study, the same number who had no one in their same field in their class. This shows that those in the comparison condition who could work with a

partner in their field of study did so, whereas in the experimental condition, some who could have did not. This will be discussed further under Hypothesis #2 in the next section.

5.2.4 Field-of-study project

Two possible reasons for the low level of on-line participation for the field-of-study project, Assignment 6.b (see again Table 8), are that:

1. Participants knew each other by this time, and completed the work more efficiently off the BB. There are many instances in the BB data where students refer to meetings they have had or will have in person off the BB. Perhaps they perceived the BB work on Assignment #6 to be redundant if they could meet their partners for discussion elsewhere. Benbunan-Fich and Hiltz (1999) discuss the anxiety and frustration students can feel when faced with asynchronous CMC delays, differences in amounts of participation from one individual to the next, and "login-lags" (Dufner, Hiltz, & Turoff, 1994 in Benbunan-Fich & Hiltz, 1999).
2. The final project was the least structured in terms of exactly what needed to be done on the BB, yet was the most challenging of the six assignments. This may have confused some participants as to what exactly the role of the BB was in this assignment. It may have given others the opportunity they were looking for to lighten their workload by ignoring the BB aspect (no marks were given specifically for the on-line segment in Assignment #6.)

When the tasks were designed for this study, the less structured approach taken in Assignment #6 was considered acceptable for this late stage in the course, in that students would have had at least 7 weeks of experience on the BB by this time. However, Hiltz & Turoff (1993) say that structured group projects are the key to success with on-line projects, and they seem to have been correct. The BB served to bring people into field of study groups in the beginning, and it did this well. The first three assignments show enthusiastic participation. However, once the relationships were established, the experimental participants seemed to find it easier to negotiate assignments in person or by telephone, even with conflicting schedules. As noted above, this could be in part due to the asynchronous nature of the communication, in which there is a definite time delay between asking a question and receiving an answer.

Hypothesis #1 was not confirmed. Due to time constraints and scheduling, some students exhibited frustration with using the BB and met in person despite the challenges that presented, or did not meet at all. The BB does not necessarily provide partners or groups for everyone within their fields of study, and indeed, may even heighten certain students' awareness of their lack of partners, due to the fact that they see others benefiting in this way by using the BB. However, using a CMC bulletin board does offer possibilities for reducing the numbers of students isolated in their fields of study substantially due to its asynchronous, disperse nature (Johansen, 1992 in Benbunan-Fich & Hiltz, 1999), as well as the possibility for participants to communicate meaningfully with each other independent of time and space (Warschauer (1997) and scheduling conflicts. In addition, some students worked with people from

other classes in the CEGEP on their English assignments, something that would never have been possible without a BB.

5.3 Discussion of the Results for Hypothesis #2 and their Significance

The second hypothesis, that "*Participants engaged in group tasks by BB virtually over the Internet will be more motivated than participants engaged in group tasks of a similar nature in a face-to-face situation*", was addressed with an examination of 8 different variables representing the course-specific motivational components at the language-learning situation level of interest (variable 1: extra-curricular language use), expectancy (variable 2: computer ability; variable 3: preferences for group work), relevance (variable 4: activity usefulness) and satisfaction (variable 5: self-reported learning), along with the learner level component of self-confidence (variable 6: anxiety/shyness; variable 7: English ability), and the language level component of motivational orientation (variable 8: motivational orientation).

Hypothesis #2 was not confirmed. No significant difference was noted between conditions on Variables 1-8. Motivation did, however, show small, significant increases for both groups from pre- to post- in some of the Language Learning Situation variables. For example, the component of expectancy, in terms of self-rated computer ability (Variable 2), did show small, significant increases in motivation for both conditions from pre- to post-, as did satisfaction in the course (Variable 5), where the majority of participants in both groups reported improvements in all areas: all four skills, vocabulary, grammar and overall English. However, the participants' interest, in terms of extra-curricular language use did not show a significant increase in either

group, nor did expectancy in terms of their preferences for group work (Variable 3), which showed that participants in both conditions began the course with distinct preferences for working alone. Furthermore, their post-questionnaire results illustrated that preference for working in groups, which was never high, actually declined across both conditions over the length of the course.

Although Hypothesis #2 was not confirmed, activity, or task, did seem to play a role in the levels of motivation. Only when the task differed in nature, due to the use of the BB, did the motivation seem to follow a different trend from one condition to the other, both in level and in categorical type. This could be seen clearly in the examination of the relevance that participants placed on the various activities of the course (Variable 4). Many of these differences stem from the fact that students ranked the activities in order of task preference (enjoyment) or the amount of stress they induced, rather than usefulness. Technophobia and on-line group work issues also seem to have played important roles in the amount of motivation engendered by specific group work assignments, and each of these issues will be discussed further below.

5.3.1 Task preference

Although the ranking question about activity usefulness on the post-questionnaire specifically asked participants to rank the activities in order of usefulness, recall that not all of the participants' reasons appeared to be about relevance or use. Other responses given by both conditions did not relate appear to relate to relevance at all, but rather seemed to relate instead to task preferences. An in-depth examination was undertaken of the response categories for the four activities which showed trends

towards between-group differences in rankings. These were the journal writing, working in groups, the job interviews, and the final field-of-study projects.

The personal journal writing activity, which was chosen most frequently as number 10 (least useful) by both groups, but twice as often by the comparison group as by the experimental group, to determine why it was so frequently chosen tenth, and why comparison participants were so much more inclined to rank it last than experimental participants (see again Tables 9 & 10). The participants from both groups who ranked the journal writing activity last did so for very similar reasons. Responses fell into six similar categories which were negative for motivation: interest, relevance, integrative orientation, satisfaction, choice / autonomy, and effort. The results for the tenth place ranking for the personal journal writing are shown in Table 15 in Appendix 8.

Nine experimental respondents chose working in groups as their number one activity. The reasons they gave fell into three categories which were positive for motivation: expectancy, social orientation and integrative orientation. Some of their responses were: "I learn more in groups" and "I like to discover new people". In contrast, only one comparison respondent chose this activity as number one and the participant's response was positive for satisfaction only. Only two types of group work happened in the course: the speaking in small groups in class, and the group work on the 6 assignments. This assignment group work happened exclusively on the BB for the experimental class and in class for the comparison group. Thus, the face-to-face group work of the comparison group did not seem to engender the same enthusiasm and

motivation as the BB group work of the experimental group. The results for the first place ranking for working in groups are shown in Table 16 in Appendix 8.

The job interview assignment was also preferred by one condition, but not by the other. Ten participants from the experimental condition ranked this activity (not done on the BB) number one, whereas only one comparison participant did so. The reasons in the experimental condition fell into three categories which were positive for motivation: interest, relevance and satisfaction. The one comparison participant cited both positive interest and positive social orientation. The results for the first place ranking for the job interview activity are shown in Table 17 in Appendix 8.

There was no doubt, however, that the 13 percent of experimental respondents who ranked the final project on the BB last did not like it. Some comments had to do with the participants' fields: "An overdose of my field of study!"; "I don't like my field of study."; "It's not useful to learn things we already know." Other comments concerned the nature of the project: "It's too complicated." and time: "I have too many other final projects."; "I have no time for this." Five categories which were negative for motivation emerged in the experimental group's responses: stress, interest, relevance, integrative orientation, alone in field of study. Stress was the number one reason, given by 6 of the 13 respondents who ranked the final project last. Comparison students seemed to feel none of this. Only one comparison group respondent ranked the final project last, and no reason was given for this ranking. The results for the tenth place ranking for the field-of-study project are shown in Table 18 in Appendix 8.

The difference between the tenth place ranking of the field-of-study project by many of the participants in the experimental condition and the first place ranking for

group work by others in the experimental condition, suggests that the experimental participants distinguished clearly between the first five assignments and the sixth, all of which involved using the BB. Many of them seem to have enjoyed the BB experience, even if they had problems with the final project. It is likely that the BB, and indeed computers in general, tend to provoke a strong emotional reaction in their users, whether positive or negative.

The final project seemed to provoke a very negative reaction in almost a quarter of experimental participants. First, there is the issue of relevance. Students lose motivation if they do not understand or agree with the purpose of technology-based activities (Barson et al., 1993; Kamhi-Stein, 2000; Warschauer, 1996, 1998). Some students did not see the connection between using computers and learning a second language:

"I have the feeling that it's not that important."

"Mixing English and computers is weird."

Additionally, stress and technophobia seemed to have played roles. These issues will be discussed below.

The fact that job interviews, as well as the resumé and cover letters (non-BB activities), were rated number one by 19 of 59 experimental participants (37%) is telling. In fact, 44 of the 59 experimental participants rated a non-BB activity as number one, and only 15 rated a BB activity as number one. Possibly students in the experimental condition had trouble recognizing the relevance of the BB work. However, BB activities were rated in the top 5 an average of 27 times out of 58 responses, or almost half the time (46%). For instance, working in groups was rated in

the top five 32 times (55%), the reading selection (assignment #3) 28 times (48%), the dictionary work (assignment #4) 26 times (45%) and even field of study final project (assignment #6) was rated in the top five 23 times (39%). This suggests a different story. Almost as many students liked the BB work as did not. The job interview and resumé work were related specifically to learning the skills of job hunting, whereas the BB tasks were more specifically related to their fields of study and to learning about their fields of study. Perhaps the true story is simply that some students saw job hunting at this point in their CEGEP career as very important and relevant, and the results reflect this.[14]

5.3.2 Stress

Why is it that stress seems to have played a much larger role for the experimental participants than for the comparison participants? External stress is a serious issue for CEGEP students. Many students from both the experimental and comparison conditions reported in their journals that they were tired and stressed and having trouble concentrating. They wrote about their frustration at having no time to spare for any courses outside of their field-of-study courses. One said program related courses and work took about 30+ hours per week. A few mentioned that they knew English was important, but that their program courses took priority.

Both groups would, in theory, have had comparable amounts of external stress (that is, stress that was not related to the task), yet the comparison group was seemingly not bothered by this in terms of the final project. Thus, for the six respondents in the

[14] Many programs place the second English course in the students' final session.

experimental group who ranked this activity tenth due to either external stress or task stress, the BB must have been a factor as it was the only difference between treatments.

Recall that the experimental group also ranked group work higher than their comparison counterparts. It may be that the final project was the least suited to the BB of all of the six projects, particularly for that 22% of the population. It may also be that just as it is necessary for a teacher to lower the level of difficulty of the task when faced with students of a lower language proficiency, it may also be advisable to lower the level of computer tasks, in terms of computer requirements, language skill and content expectations, when faced with language learners or learners with limited computer experience. Indeed, according to Salanova, et al. (2003), if the groups' levels of collective efficacy were low, then working on the BB under time pressure would have made the task seem more difficult for them than for the comparison group. This would help explain why participants used the BB less for the final assignment than for assignments 1 to 5. The level of difficulty was not too high for either the comparison group or the experimental group, as evidenced by the fact that the grades on the assignment were not significantly different. However, it may have been that the combination of the higher expectations of Assignment #6, in terms of output and final evaluation (see Appendix 3), and a looser structure tipped the balance in terms of the experimental students' stress load due to the fact that they were working on computers. Hiltz and Turoff (1993) suggest that less structured, loose activities seem to confuse students and may lead to feelings of stress and technophobia.

5.3.3 Technophobia

Why would the BB trigger such a stress reaction? Technophobia, or computer anxiety, is one possible explanation and is a recognized phenomenon. Egbert and Hanson-Smith (1999) state that it comprises a whole range of negative emotions, attitudes and beliefs about computers and about students' own ability to work with computers. Hiltz & Turoff (1993) call it computer angst. Benbunan-Fich & Hiltz (1999) note anxiety amongst their computer-using students for a variety of reasons.

The open-ended question: "*Please explain your answer and include examples.*" was asked after the first question in Section 9 on the post-questionnaire about satisfaction in the learning experience. It asked how much participants felt their overall English ability had improved by using the BB (experimental condition) or by doing group work (comparison condition). In the experimental group, 34 participants provided additional explanations which fell into several categories. Experimental respondents who answered "*Not at all*", did so for these reasons: no time; hatred of computers; fear of computers; and it was too easy. Respondents who answered "A *little*", did so in a few cases for negative reasons: computer difficulties; not comfortable on the computer; no time. Twenty-one comparison students also provided detailed explanations for their original responses. In some ways, these were quite similar to those of the experimental condition and in other ways very different. Lack of time was a factor that was not specific to the BB; however, computer anxiety and frustration were not mentioned by the comparison group.

From the experimental participants' journals come the following negative comments about using computers and the BB in English class:

"I have to understand English and computer that's double gold (goal) because the computer is like Japonnese to me."

"Computers are hard."

"I hate computers."

"I'm not good with a computer."

"I understand that you want your course to become really interesting but it scare us because they his too much work to do like on the web and it really not an traditional course the way you make it...but finally your course seem to be like a big montain to cross."

Here are some more comments which suggest a second issue, that of frustration felt when computers slow things down:

"The computers are too slow." (Many students said this at one time or another in their journals)

"I feel like we are losing (wasting) our time."

"A waste of time. It's too slow." (More than one)

"I didn't really appreciate the first part of this course today. I think we lost a lot of time trying to make the computer work and that, during this time, we didn't learn a lot of English."

Weinberg (2002) also notes this among his students' reactions.

Participants would also forget how to log on from one week to the next (a phenomenon noted by other researchers, for example, Weinberg, 2002, as well). They would get lost on the Internet. They would encounter computer glitches and panic. They would give up very easily. Others, however, were more experienced on

computers and their confidence showed, even faced with computer problems. Lam (2000) states that some studies have mentioned a positive correlation between a participants' amount of computer experience and positive attitudes towards computers (Bradford, 1984; Burke, 1986; Clerc, 1985; Kellenburger, 1994; and Taylor, 1986 in Lam, 2000). Adrianson and Helmquist (1993) and Warschauer (1996c) also noted this. Salanova et al. (2003) points to a similar relationship between computer anxiety and computer experience from outside the field of SLA, as does Chua (1999 in Salanova et al., 2003). In other words, people's level of computer anxiety is lower when they have more computer experience. Salanova et al. also found that computer users who have high levels of self-efficacy are not negatively affected by technology.

5.3.4 Group work

The participants' attitudes towards group work show that they began the course with distinct preferences for working alone rather than in groups. This may be due to their schedule and time constraints, stress and overwork. Their post-questionnaire results show that their preference not to work in groups increased significantly across both conditions over the length of the course, and no significant difference was noted between conditions. Both conditions, with their heavy emphasis on group work, would have been challenging for the participants, considering their predispositions for working alone.

On the open-ended question of section 9 of the post-questionnaire, where participants were asked to say whether or not their English had improved, some respondents from both conditions said that the group work did not help them. From the

comparison condition we see that some group members experienced frustration with their teammates. One comparison participant stated "My group is never available to do the job". Another complained that he was alone in his field of study.

Some experimental participants also felt frustration about working in their on-line groups. A look at the BB shows a number of instances where one student asked another a question, and although the various conversations went on about them, their question never received an answer. Lack of immediate response and feedback are characteristics of asynchronous disperse CMC and would likely be avoided with synchronous disperse modes, like chat or teleconferencing. However, these modes have their own drawbacks, including scheduling constraints. Benbunan-Fich & Hiltz (1999) and Nunamaker (1991) found that CMC users were less satisfied with the process of working electronically because of having to decide when to stop waiting for partners to write back and having to work harder because of having trouble coordinating the distribution of the workload (Benbunan-Fich & Hiltz, 1999).

On the other hand, some participants from both conditions responded that the group project had helped them improve their English. They noted improvements in comfort level when speaking: "I'm less shy, more comfortable, and fluency will come" and "I felt more comfortable speaking in English than before, I'm less shy, I don't mind as much if my English doesn't sound very good".

Hiltz and Turoff (1993) enumerated several reasons why group work fails (see Section 2.3.5). Their critical mass hypothesis, which states that a minimum of 8-12 participants are necessary for a successful group, was not borne out in this study. A minimum of 15 messages were required to complete all six assignments. The average

number of BB messages per participant was 16. This means that in general the participants did the assignments (what they had to do) but no more. This also suggests that participant motivation was external (they did the assignment for grades). Forum 19 (Nursing) had 8 active members, but only posted an average of 11.22 messages per participant, which was 3.78 fewer than the minimum of 15 messages required to fulfil the requirement. They also did not complete the online portion of assignment 6b. One of the more successful groups was field of study 22 (Special Care Counselling) with 17 members participating actively. They posted an average of 18.86 messages per participant, yet still not everyone completed 6b. Two groups, however, had a high average number of messages per student, yet a low number of participants: field of study 1 (Administration) and field of study 16 (Leisure studies). The Administration BB was very successful, with 5 active members, who posted an average of 23.2 messages, the majority of whom also completed 6b. The Leisure studies BB group was also very successful, with only 3 active members, who posted an average of 27.33 messages and also completed 6b (see again Table 8). These two groups may have had a more self-regulated, internal motivation, but it does not seem to have come simply from the number of participants. However, it should be noted that some of the success of these smaller groups may have stemmed from the general tendency across all groups to meet off-line.

Another of Hiltz and Turoff's reasons for group failure, the lack of at least three geographical locations, cannot be considered crucial to success in this case, although having the participants at more of a distance (outside of the CEGEP) would have discouraged meetings in the cafeteria in lieu of online communication. On the other

hand, one of their other reasons, the lack of an adequate group leader, may have had some impact in some of the groups, especially where most or all of the group members were new and inexperienced users. This will be addressed in the pedagogical implications section below. Inconvenience, another reason, also played a key role. Computers were available in the CEGEP from 7 am to 11 pm for student use. Still some students used the lack of a computer in their home as a reason why the work on the BB was difficult for them. Hiltz and Turoff's final reason why groups fail to work well together, that the lack of a need or desire to communicate will weaken a group's resolve, may be responsible for the lack of success of assignment 6b, in which interaction was not integral to successful completion of the task.

5.3.5 Task type

Each of the six assignments resembles one of the communication task types in Pica et al.'s (1993) Typology of Tasks. Pica et al. states that the jigsaw and the information gap tasks are the most effective at providing comprehension and interaction opportunities for the learner. Problem-solving and decision-making are next, with opinion exchange as least effective. Assignment 1, Introductions, and Assignment 2, tell of a controversy or new development in your field, were information gap activities, and although no marks were assigned, they were very successful with 79 participants overall completing Assignment 1 and 71 participants completing Assignment 2. Assignment 3, the reading selection activity, was a jigsaw, and was in fact the most successful of the activities, both in terms of participation and in enthusiasm from the 69 participants. Assignment 4, which can loosely be considered a

problem-solving task, saw a reasonable participation of 63 participants, although not all of these participants completed the work they started here. Assignment 5 was a proposal and the first half of a decision-making task. It had 64 participants. Assignment 6a, the vote, was the second half of the decision-making task with 47 participants. Although participation was not quite as high for these two final tasks as for the three first, both of these were successfully completed by the majority of participants.

The last assignment, 6b, the discussion of the division of tasks, was a type of opinion exchange. It had the lowest participation rate, and was the least well-liked, with only 25 participants. Thus, if as Pica et al. suggests, certain tasks are more effective for communication practice than others, then perhaps students are more motivated by the more effective tasks. In this way their desire to communicate, as well as their need (information gap and jigsaw tasks require a compulsory participation as well), would be stronger for these task types.

5.3.6 State versus trait

Variables 1-5 discussed above reflect motivational states which are situation-specific and task-dependent (Dörnyei, 2002b). Rather than considering motivation as static, motivation which is measured through the four components of the learning situation level should be considered to be more fluid and changeable over time. On the other hand, self-confidence, in terms of Anxiety/shyness (Variable 6) and Self-rated English ability (Variable 7), is a learner level trait. The findings showed stable results over time, which is expected with trait motivation (Tremblay, Goldberg, & Gardner, 1995). The participants of this study were moderately anxious and shy, but not overly

so. They were not lacking for confidence in their own language-learning abilities at the outset of the study, and this linguistic self-confidence had risen very slightly, but not significantly, by the time of the post-testing. This suggests that linguistic self-confidence is separate from other types of confidence, such as the lack of confidence in their computer ability which some students experienced in the experimental condition in that the linguistic self-confidence of the experimental participants did not change even though some of them experienced technophobia (a lack of confidence in their computer abilities).

In terms of the language level trait of motivational orientation (Variable 8), more than half of the students in each condition entered this course with an instrumental orientation. These findings provide evidence that the two conditions were equivalent at the outset of the study in that there were no significant differences found in the orientations participants expressed on the pre-questionnaire. They also provide a backdrop for the results of the other 7 variables. As has been stated previously, motivational orientations are relatively static over time as they describe motivation at the language level, rather than at the learner level or language-learning situation level, and can, along with other trait motivations, interfere with the more fluid state motivations in complex ways (Dörnyei, 2002b).

These orientations are possibly very useful in predicting in advance what type of language course, and course content, a student might want or need. For instance, for the more than half of the participants in the study who expressed a highly instrumental orientation, in which they stated that they were taking the course strictly because they had to, because they needed it for their job, or because it would help them to get a job,

such activities as the job interview role play and the resumé and cover letter assignment (both done off the BB) would be expected to be appealing. Indeed, the high ratings these activities received, with the exception of the job interviews in the comparison group, suggest that this might be so and that these particular activities were a good fit for participants with an instrumental orientation. These qualitative results highlight some differences between the two conditions, as well as some similarities. However, more research into this area would need to be done to determine unequivocally whether it truly was the instrumentally-oriented participants who were more motivated by the grammar and certain of the job and field-of-study activities.

The motivational orientations used in this study were based on those of Clément, Dörnyei and Noels (1994) and Clément & Kruidenier (1983), and they described the participants well. The fact that more than half of these intermediate-level CEGEP students had instrumental goals does not contradict Clément & Kruidenier's (1983) or Dörnyei's (1990) statement that instrumental goals are key for foreign language (FL) learners up to an intermediate level (See Section 2.2.4 regarding the EFL nature of ESL in Quebec).

5.4 Discussion of the Results for Hypothesis #3 and their Significance

The third hypothesis, that "*Participants engaged in group tasks by BB virtually over the Internet will do better on their final field-of-study project, and in the course overall, than participants engaged in group tasks of a similar nature in a face-to-face situation. (The learning outcome for the experimental participants will be higher)*", was not confirmed in a fairly decisive manner with quantitative data from the final

project marks, course marks and post-questionnaire. Results on three *t*-tests for variation between groups, on final project marks, final course marks and participants' self-reported learning showed no significant difference between the two treatments.

5.4.1 Fine-grained marks

It is possible that scores, such as final course marks and final project marks, weren't fine-grained enough to get at the minor improvements in learning which may have occurred over such a short period as fifteen weeks.

5.4.2 Improvements in learning

Comments from the open-ended question after the self-reported learning section of the post-questionnaire were more revealing. The majority of participants in both groups did report improvements in learning in all areas: all four skills, vocabulary, grammar and overall English. Responses showed that participants believed they had improved in grammar, especially verb tenses and sentence structure, and vocabulary. Two notable responses from the experimental group as to why they felt they had improved were: "because I communicate with other students by writing to them" and interestingly "it's was like practice, so I became a little bit better. I think we need a lot of practice to say that my ability have improved a lot". One experimental student wrote "They are two talking level: the lifes one and the written one...they are so different and we have to practice them both". Yet another wrote "My English improved a lot because I had to read and write in English so I had to make resarch to find or understand the words" and another said it was "because we had to talk with other students". One even

noted: "I able now to write whit less mistakes, for the verbs!". One comparison participant commented "My grammar is improving and my talking is muchly to." and another said "A liked to learn new words wich help me writing and speaking better.".

However, there was no difference in the learning outcomes for the experimental and comparison groups. It is important to point out that this suggests that both methods worked equally, with neither one better than the other, in terms of learning outcomes. Thus, if teachers wished to integrate a CMC tool, such as a BB, into their classroom, they should not hesitate to do so simply on the grounds that it might negatively affect their students' grades.

5.5 Conclusion

Both experimental and comparison groups began the course with distinct preferences for working alone, due to time constraints and heavy school schedules. The BB was thought to offer an alternative method for working in groups which would mitigate these time and scheduling issues. For some participants it did this. However, by the end of the course, there was a significant increase in the preferences of participants from both groups for working alone, showing that the heavy emphasis on group work in the course was not the best match for either group. While there was no significant between-group difference, the experimental group showed signs of stress and technophobia, specifically when doing the final project, which the comparison group did not experience. The participants' levels of computer experience and the task types they are given seem to play key roles in whether or not a CMC project will be successful in the CEGEP ESL classroom.

Although the three hypotheses of this study were not confirmed, using CMC did provide some students with partners in their fields of study which they would not otherwise have had. It also connected students from different classes of English in the CEGEP, who then continued to work together across classes. Finally, student motivation and learning outcomes were not dissimilar in the experimental group to those of the comparison group. Thus, using CMC, in the form of a BB, in the ESL classroom is a viable alternative to using more traditional teaching methods in that it leads to similar levels of motivation and language learning success.

5.5.1 Limitations of the research

The context of this study, that of addressing a particular set of problems in technical B-block courses within the Quebec CEGEP system, makes the results difficult to generalize. In addition, interviews with participants would have allowed the researcher to ask participants questions about their progress throughout the study, and would have provided more detailed information than did the journals. Finally, although there was a relatively large number of participants in this study, there were only two teachers at one CEGEP involved. This is a limitation in that BB group work, according to Hiltz and Turoff's (1993), should be conducted over three geographical locations to ensure success. The involvement of two additional CEGEPs across Quebec would have reduced off-line meetings by making the BB an integral part of the group's successful communication.

Additionally, the information from two questions on the post-questionnaire, 10.b.1 and 10.b.2, refers only to what happened in the final project, which was a more

challenging assignment and fell at the end of term when students were busier with program-related work. They do not provide information about how the groups worked over the term, nor about whether or not the participants worked together on any of the other projects. This is a limitation of the questionnaire. To compensate for this, the data from the BB were examined.

5.5.2 Suggestions for Future Research

The purpose of this study was to examine the viability of using CMC to solve specific problems within the ESL CEGEP system, and assess its potential to engender and sustain motivation in students. It also compared motivation and learning outcomes of experimental participants with those of comparison participants. The results of this study have suggested some new questions and possible avenues of future inquiry.

Some of the tasks (activities) undertaken on the BB appeared to be more motivating and less conducive to engendering stress and technophobia than other tasks for the experimental participants. There is a need for further research investigating which task types work best on the Internet. In addition, it would be useful to investigate the relationship between participants' motivational orientations at the language level and task topics at the learning situation level. For example, if it could be shown that an instrumentally oriented participant preferred job-related tasks, then perhaps it could also be shown that that same participant might be more at ease with BB work if it related to job activities.

BB data provide a wealth of information which could be analysed for quantity and quality of the groups' interaction, and level of cohesion. Dyads could be analysed

to determine if co-construction of motivation, which Dörnyei (2002) mentions, also happens online. A detailed and descriptive analysis of the resultant BB data of a study such as this would prove very interesting and informative, and could easily be undertaken, although it was beyond the scope of this thesis. Turn taking and degree of interactivity could be quantified. Finally, interviews with student participants would provide additional insight into their levels of motivation prior to, during and after the BB project work.

5.5.3 Contributions of this Study

This study makes a case for using CALL in the ESL classroom in that levels of motivation and learning outcomes show no significant differences from one condition to the other, and informs teachers and researchers of some viable tasks and positive outcomes, as well as some challenges and negative consequences, of using one particular asynchronous CMC tool in the ESL classroom. Some problems with a project such as this, which can go outside the confines of one classroom, have been identified in this study and these are enumerated under Pedagogical Recommendations to follow.

This study has also made contributions to the motivation literature. Given the EFL nature of ESL in Quebec (see Section 2.2.4), it was suspected that Dörnyei's (1994) Components of Foreign Language Learning Motivation (see Section 2.2.3) would provide an informative and successful framework for researching motivation in the Quebec ESL classroom, and indeed they did. The motivational components of expectancy and satisfaction were especially fruitful in that, through their examination, the very fluidity of motivation and some minor changes in participant motivation which

occurred over the fifteen weeks of the language course were detected. In addition, this study is in line with Clément & Kruidenier's (1983) and Dörnyei's (1990) findings that an instrumental motivation is key among EFL students up to an intermediate level with more than half of all participants having an instrumental goal among their top three reasons for taking their English class. Moreover, Dörnyei and Kormos (2000) found that the situation-specific motivational variables were found to have an impact on task engagement. This study also noted a this.

This study has contributed to the CALL literature as well. Chapelle (2003) states that future CALL research should focus less on comparing face-to-face and on-line conditions, and more on which task types have sound pedagogy for on-line work[15]. This study has shown that group tasks which require interaction, such as jigsaw and information gap-type activities, may be more suitable for on-line group work. In fact, the findings suggest that there is a task typology on-line which is similar to that which Pica et al. (1993) suggest for face-to-face pairs and groups.

Finally, the message that comes out of this study is that caution may be warranted when using CMC in research or in teaching. It appears evident that sound pedagogical goals for using CMC are key to a successful on-line project, and that using CMC as a motivational strategy may not be appropriate.

5.5.4 Implications for pedagogy

This study has many implications for pedagogy, especially for CEGEP teachers. As more and more teachers turn towards computers and the Internet as the solution to a variety of problems we are facing in our classrooms, it is crucial that we

[15] Chapelle (2003) became available after the data for this study had been collected.

first recognize and weigh the challenges that these new technologies still present for the learner. Teachers who wish to experiment with CMC technology or implement it in their classrooms need to find ways of activating student **interest** in learning a language aided by technology; controlling for potentially low student computer- and language-related **expectancy** levels; matching activities to students' needs, in terms of **relevance**; and reducing problems such as technophobia and stress. Teachers who wish to use technology in the classroom must find a way to take what is a novel and exciting approach to the course for them, and translate it into a **satisfying** experience for their students.

Following are some specific suggestions for CEGEP teachers who would like to implement a BB field of study group project in one of their courses.

1) Identify the reasons for choosing to use a BB over a more traditional method, such as face-to-face group work.
2) Use a BB because the technology is necessary to help you and your students to achieve specific goals.
3) Prepare the BB carefully in advance, and using your class lists, amalgamate fields of study which have only one or two participants with other, similar fields and give it a more general name. For example, Crafts, Fine Arts, Dance and Music could all be joined under Creative Arts.
4) When creating assignments, keep in mind that jigsaw and information gap activities work well in an online setting and seem to engender participant motivation for the task.
5) Create an authentic reason for students to perform each task.

6) Try not to have a large, end of term, project online. The additional stressor of completing a challenging project online may be too much for some students to handle.

7) BB training at the beginning of the course is important, and even with careful training, such as was done for this study, be aware that some students will have difficulty navigating the BB.

8) Do not hesitate to do an on-line project on the grounds that it might negatively affect students' grades.

9) Do not assume that just because the project is on the computer it will be motivating for all students and do not do it just because you think it will be more motivating than something else.

It is interesting to note that many of the popular activities (from the ranking, section 8 on the post-questionnaire) were off-line. Two of them, the listening exercises and the job interview, took place in an ancient Tandberg listening lab, with crackly sound and background noise. The reasons for using a computer lab, or CMC tool, must be very important ones, in that they will have to outweigh all of the obstacles to using technology in teaching, such as technophobia and increased learner stress, computer technical problems and a steep learning curve. Sengupta (2001) cautions that there are pitfalls associated with using CMC tools for classroom learning, such as a heavy and stressful workload for both the students and the teacher and the necessity for students and teacher to have certain electronic literary skills before they begin (paragraph 54). Warschauer (2000) also stresses this as does Weinberg (2000).

Therefore, using CMC, in the form of a BB, in the English-as-a-second-language classroom is a viable alternative to using more traditional teaching methods in that it leads to similar levels of motivation and language learning success. However, it is important to use CMC with sound pedagogical goals in mind, for activities which need CMC modalities, and not to simply assume it will be more motivating for students than face-to-face work in and of itself.

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Appendix 1: Consent form

CONSENT FORM TO PARTICIPATE IN RESEARCH

This is to state that I agree to participate in a program of research being conducted by Caroline Orton of the Department of Education (T.E.S.L.) of Concordia University.

A. PURPOSE

I have been informed that the purpose of the research is to examine English-as-a-second-language students in a classroom setting in order to learn more about how they learn best. The data gathered will be used in Caroline Orton's Master's thesis. If I wish to know more, I understand that Caroline will be happy to share her findings with me after the study.

B. PROCEDURES

The research will take place at CEGEP du Vieux Montreal during the 15 weeks of the winter session, 2003. I will complete two questionnaires (one at the beginning of the session and one at the end), complete a personal journal giving feedback on the course activities, and take part in the activities which make up the course content. I understand that I will be assigned a code so that all information on the two questionnaires will remain anonymous to the researcher until after all marking has been completed. This is to ensure that there will be no bias in marking.

C. CONDITIONS OF PARTICIPATION

• I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.

• I understand that my participation in this study is CONFIDENTIAL (i.e., the researcher will know, but will not disclose my identity)

• I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) _____

SIGNATURE _____

WITNESS SIGNATURE _____

DATE _____

If at any time you have questions or concerns regarding your rights as a research participant, please feel free to contact Andrea Rodney, Office of Research (Secretary to University Human Research Ethics Committee) at (514) 848-4887.

Winter 2003

Syllabus 604-TQ1-VM

Course title:
Anglais (Ensemble no. 1)
Formation Générale Propre Aux Techniques

Weighting:
2-1-3

Prerequisite:
604-101-03

For homework, lab work, self-study, cool links, and a whole lot more, check out our web sites!

Languages

Cégep du Vieux Montréal

TQ1 Intermediate English

Introduction:
The course 604-TQ1-VM is designed for intermediate level students in ESL who are studying technical subjects which are generally three year programs. It is the second of a sequence of two mandatory courses intended to prepare students to function in an English-speaking environment. Given that for most students, this is the last English course before entering the workforce, this course will help them to improve the English that they will need to use in the disciplines that they will eventually work in.

Students have the support of an English monitor program for conversation and cultural enrichment. As well, students are required to make use of language-learning resources outside the classroom, including the Internet, newspapers, magazines, radio and television.

Objectives:
General Objective
To communicate in English with a certain ease by using current forms of expression that can be applied to real-life situations and contexts as related to the workplace.

Final Objectives: The four skills
On completion of this course, students will meet the following objectives:

1. Listening:
Understand the meaning of an authentic oral message of about 5 minutes.
1.1 Understand the gist of the message as well as the main idea(s).
1.2 Recognise the organisational logic and chronology of the message.

2. Reading:
Understand the useful elements in an authentic text related to his/her field-of-study to accomplish a specific task.
2.1 Understand the gist of the reading.
2.2 Identify elements that are of use to accomplish a specific task (through skimming, scanning, glossing, reading for details, inferring, etc.).
2.3 Use that information to accomplish a specific task (e.g., use information from two articles to present arguments in a debate).

3. Speaking:
Talk about or discuss some aspect of his/her field-of-study for 4 to 5 minutes.
3.1 Communicate clearly & coherently. Be comprehensible to a non-expert.
3.2 Communicate in a manner (correct register in terms of formality) that is appropriate to the situation.
3.3 Use terms and expressions related to field-of-study.
3.4 Use appropriate and correct grammar.

4. Writing:
Write a text related to his/her field-of-study.
4.1 Write 300 words clearly and coherently on a subject related to field-of-study, and comprehensible to a non-expert.
4.2 Use appropriate and correct grammar and spelling.
4.3 Use terms and expressions related to field-of-study.
4.4 Write in a style/genre typical of workplace contexts (e.g. CVs, proposals, reports, etc.).

Course Specific Objectives
To attain the required level of competency in each skill, mastery and acceptable application of the following aspects is necessary:

A. Grammatical notions:
1. Verb tense review (active and passive voice: affirmative, negative, and interrogative forms):
- simple present and present continuous
- simple past
- present perfect
- future with time clauses

2. Modal auxiliaries
3. Subject-verb agreement
4. Count/non-count nouns
5. Comparatives/superlatives
6. Clauses and connectors
7. Gallicisms

B. Writing notions:
1. Basic punctuation
2. Capitalisation
3. Connectors and conjunctions
4. Characteristics of a CV and cover letter
5. Characteristics of proposals and reports

C. Speaking functions and notions:
1. Expressing opinion, agreement or disagreement, and supporting one's view
2. Structuring a presentation

D. Reading and listening strategies:

1. Predicting, scanning, skimming, underlining main points and details, note-taking, summarising, paraphrasing, glossing.

Teaching strategies

Methods:
In order to realise the above objectives, a number of different pedagogical activities will be used:

1. Listening:
- Listening to a variety of authentic spoken texts
- Practice in note-taking
- Identifying main & secondary ideas
- Listening strategies: predicting, locating specific information, reformulation, questioning, group discussion

2. Reading:
- Reading of articles and texts from different sources
- Identification and reformulation of main and secondary ideas of a text
- Recognition of types of discourse (e.g., description, narration, expository, persuasive)
- Practice in text summary or commentary (written or oral)
- Understanding of vocabulary, expressions and content
- Use of reference tools (dictionary, thesaurus, grammar reference book, on-line indices)

3. Speaking:
- Role-plays
- Pair work and team work
- Short presentations on socio-cultural and work-related topics.

4. Writing:
- Writing workshops will focus on the following points:
- Grammar points
- Verb tenses (use and agreement)
- Sentence structure (simple, compound, complex)
- Identification and use of organisation patterns (e.g., cause and effect, chronology, thesis statement and examples, comparison and contrast)
- Writing of a CV and cover letter
- Use of authentic texts as models for writing

Means:
Selected audio, video, Powerpoint, Frontpage, an electronic projector and computer, the Internet, bulletin board acetates & newspapers will be used.

Course Content

Week:	Themes:	Assignments:	Homework:
1	Introduction to course	Introductions, Interviews, Forms to fill out *Writing:* Personal Journal (on-going)	Get grammar book
2	Organizing Teams Resumés	*Listening*: Comprehension1 *Assignment 1:* Introducing yourself	*Grammar:* Starting test - pages viii to xiii *Writing:* Resumé
3	Cover Letter writing	*Assignment 2:* Talking about your field-of-study	*Grammar:* Do 3 weakest items from Starting Test (3 units) *Writing:* Cover letter
4	Reading list *Grammar:* Question Formation	*Listening:* Comprehension 2 *Assignment 3:* First entry to reading list	*Grammar:* Correct resumé and do 3 weakest items from resumé (3 units) *Writing*: Prepare 6 questions about first reading entry
5	Job Interviews	*Listening:* Comprehension 3 *Speaking:* Job Interview Questions	*Grammar:* Correct cover letter and do 3 weakest items from Cover Letter (3 units) *Reading:* Answer 6 questions about someone else's reading entry
6	Job Interviews Reading Strategies	*Speaking:* Job Interview Role Play	*Reading Comprehension:* Getting a job *Assignment 3:* Second entry to reading list. Prepare 6 questions.
7	*Grammar:* Verb Tense Review	*Speaking:* Presentation of Readings to group *Assignment 4:* Creation of vocabulary list	*Reading:* Answer 6 questions about someone else's reading entry *Grammar:* Practice Test

(Continued on Page 3...)

Course Content

Week:	Theme:	Assignments:	Homework:
8	*Grammar:* Present Perfect versus Simple Past Research Project	Grammar Test	*Reading Comprehension:* Virtual Tour *Assignment 3:* Third entry to reading list. Finalize reading list for your field-of–study group
9	Research Skills Proposal Writing	*Assignment 5:* Field-of-study research project proposal	*Grammar:* Present Perfect (3 units) *Writing:* Research project proposal
10	Research Skills Report Writing	*Assignment 6:* Field-of-study research project *Speaking:* Proposal Presentation	*Writing:* Research Project
11	*Grammar:* Passive Voice	*Listening:* Comprehension 4 *Assignment 4:* Finalize field-of-study vocabulary lists	*Writing:* Research Project *Grammar:* Passive Voice
12	*Grammar:* Clauses	*Grammar:* Clauses *Speaking:* Discussion of Research *Assignment 6:* Field-of-study research project due	*Grammar:* Practice Exam

Review and Exam Schedule

13	Grammar and Listening Exams
14	Reading and Writing Exams
15	Speaking Exam (Walking Tour)

Note: The professors reserve the right to modify this course if necessary.

Evaluation Guidelines:

See **Summative Evaluation** *on page 4 for grade distribution.*

Strategies

For each concept studied in class, there will be activities permitting students to assess their comprehension of the material taught. Some of these activities will be corrected and count towards the final grade and some will not.

Immediate correction and feedback will allow students to ask for clarification and take necessary steps to address any problems which may present themselves. Students should always feel free to ask for extra help or clarifications in class, by appointment or through e-mail.

Note.

The weighting of this course is 2-1-3. This means that there are two hours of class time, one hour of lab work or classroom, as well as three hours of work to be done outside of class. These three hours of individual work are essential for the successful progress of the students. Time allotted to individual work per week is comprised of homework, as well as activities such as visits to the monitor, reading activities, laboratory work, etc.

A minimum of 25% of the final mark will have been collected by the end of the mid-point of the course (week 7).

(Continued on page 4...)

Rules and Regulations

1. Course attendance

Although absences from English classes do not automatically result in a failure of the course, it is extremely important that students attend classes regularly. Because the learning of a second language is progressive in nature, absences will severely limit the student's ability to succeed.

If, however, students are absent from class, it is their responsibility to find out what happened in that class, and to be prepared for the following class, including the completion of any homework which may have been assigned.

2. Homework

All students, regardless of whether they were absent, are responsible for doing homework on time. Although not all homework will be graded and count towards the final evaluation, it is strongly recommended that the student complete homework in order to improve his or her language acquisition.

Graded assignments which are handed in past the due date can be penalized at the discretion of the teacher. Assignments will be accepted no later than five working days after the due date. Students must keep all corrected work until the final date for the revision of marks has passed.

3. Exams

Students who miss a final exam for a valid reason, MUST arrange to take a make-up exam within the week following the original exam date. The exam is arranged by contacting the teacher within a week of the date of the original exam and presenting a written note (such as a signed note from a doctor) justifying the absence.

4. Course work in class time

Any missed assignments done during class time that count for more than 7.5% of the final grade may be made up under the following conditions:

- You come to teacher within one week to arrange the make-up assignment. It is therefore the student's responsibility to be aware of what was done in the classes that were missed.
- You have a written note (such as a signed note from a doctor justifying the absence).

5. Plagiarism and Fraud

Plagiarism and fraud, either during an exam or on a homework assignment, will result in an automatic zero. Furthermore, the pre-determined percentage for that exam or assignment will be strictly respected.

Summative evaluation (...Continued from page 3)

Assignment 1	-	Introducing yourself (formative evaluation)
Assignment 2	-	Discussing your field-of-study (formative evaluation)
Assignment 3	9%	Reading list (3 entries per student; 2 sets of six questions; 2 sets of answers)
Assignment 4	5%	Vocabulary list (10 English items per student plus definition and translation)
Assignment 5	4%	Field-of-study research project proposal
Assignment 6	12%	Field-of-study research project
Speaking	4%	Presentation of readings to group
Speaking	4%	Presentation of proposal
Writing	-	Personal Journals -1per week (formative evaluation)
Writing	5%	Resumé and cover letter
Listening	6%	Comprehension Exercises (3)
Reading	4%	Comprehension Exercises (2)
Grammar	8%	Tests (2)
Grammar	4%	Homework
Subtotal	**65%**	

Evaluation of Final Exams

Listening Exam	7.5%
Reading Exam	7.5%
Writing Exam	7.5%
Speaking Exam	7.5%
Grammar Exam	5%
Subtotal	**35%**

Mediagraphy

1. Required materials:

- Eastwood, John. Oxford Practice Grammar with answers. Oxford University Press, Oxford. 1999.

Available at C.E.C (Michel Fortin) Bookstore
Telephone: (514) 849-5719
3714 Saint Denis (corner of Pine).

2. Selected references used by professors in preparing this course:

For more sources of reference go to:
"Just for teachers' http://www.cvm.qc.ca/corton/teachers.htm

- Brown, Douglas, H. Teaching by Principles: An interactive approach to language pedagogy. Prentice-Hall Regents, Englewood Cliffs, New Jersey. 1994.
- "Building Web Sites"
  PC Novice Learning Series
  Volume 5, Issue 5
- TESL-L Electronic Forum for teachers
  http://www.usembassyjakarta.org/tesl-l.html

Appendix 3: Marking Criteria for the BB Group Project (Assignments 5 and 6)

Student: _____ group: _____

604-TQ1-VM Group Project (Part 1): Proposal

Assignment:

You should write a proposal explaining what you wish to do for your group project and post it on bulletin board no later than your week 11 class. You should do this individually.

Criteria:

- **Content**

  You say

  - why you have chosen your topic 1 2 3
  - what you wish to achieve (your goal(s)) 1 2 3 4 5

  Comments:

- **Organization**

  You propose a plan of action for your group to follow which is

  - logical 1 2 3
  - complete 1 2 3
  - manageable in the 3 weeks allotted 1 2

  Length

  - Your proposal is 200-250 words 0 1 2

  Comments:

- **Grammar**

  - Your verb tenses are appropriate 1 2 3
  - Your verbs are accurately formed 1 2 3
  - Other grammar is error free 1 2 3

  Comments:

- **Mechanics**

  - Your spelling and punctuation are accurate 1 2 3

  Comments:

/30 (4%)

Student: _____ group: _____

604-TQ1-VM Group Project (Part 2): Research Project

Assignment:

a) Vote: Read the proposals of the others in your group and as a team decide (by vote on the BB) which one you will do as your field-of-study research project.

b) Work as a group to divide up the work (you may use the Final Project area of the BB for discussion), conduct research and complete a field-of-study related project. Post the jointly-created project to the Final Project section of the BB, and hand in a printed version as well, by the deadline.

Criteria:

A. Group mark

➢ **Content**

• Does the project fulfil the goals laid out in the proposal?1	2	3	4
• Is the written material clear and coherent?	1	2	3
• Is the written material well-researched?	1	2	3
• Is the written material interesting?	1	2	3
• Is the visual material appropriate and helpful?	1	2	

➢ **Organization**

• Does the project have an introduction section?	0	1	
• Does each section have a subtitle and student's name?	0	1	2
• Is the information presented in a logical way?	0	1	2

➢ **Group Cohesion**

• Are each of the written sections well-integrated into the whole?	0	1	2
• Is all necessary or pertinent information covered with no overlapping of concepts and ideas?	0	.5	1
• Does your project suggest group cooperation?	0	1	2

B. Individual mark

➢ **Mechanics**

• Is your spelling accurate?	1	2	
• Is your punctuation accurate? (Capitals, commas, periods)	1	2	
• Your individual text is 300 - 350 words	0	1	2

➢ **Grammar**

• Are your verb tenses appropriate?	1	2	3
• Are your verbs accurately formed?	1	2	3
• Are there other grammar errors which affect comprehension?	1	2	3

➢ **Comments:** **/40 (12%)**

Appendix 4: Pre-Questionnaire

Questionnaire #1 ***Code Number:*** _____ ***Group:*** _____

1. **Sex:** ☐ Male ☐ Female

2. **Age:** ☐ Less than 17 ☐ 7-18 years old ☐ 19-20 years old ☐ 21-25 years old ☐ More than 25

3. **Previous language experience:**

a) Have you participated in a 'bain linguistique'? ☐ YES ☐ NO

b) Have you gone on an English language exchange program? ☐ YES ☐ NO

c) Have you ever lived in an English area? ☐ YES ☐ NO

d) Do you have any English relatives or close friends? ☐ YES ☐ NO

e) Have you ever studied a third language (other than French or English) in school? ☐ YES ☐ NO

f) Which other languages do you know how to speak? _____

4. **Language habits:**

How often do you...

1)	Watch TV or movies in English?	Never	Occasionally	Frequently	Always
2)	Listen to the radio in English?	Never	Occasionally	Frequently	Always
3)	Read in English?	Never	Occasionally	Frequently	Always
4)	Speak to friends in English?	Never	Occasionally	Frequently	Always
5)	Speak English at work?	Never	Occasionally	Frequently	Always

5. **English ability:** (1 = poor, 2 = OK, 3 = very good, 4 = Excellent)

➢ Rate your ability to...

a)	Read in English	1	2	3	4
b)	Write letters in English	1	2	3	4
c)	Write an essay in English	1	2	3	4
d)	Speak English to classmates	1	2	3	4
e)	Speak English in social situations (i.e. at a party)	1	2	3	4
f)	Use English on the job	1	2	3	4
g)	Use correct English grammar	1	2	3	4
h)	Relax while speaking English	1	2	3	4
i)	Learn English well	1	2	3	4
j)	Pass this English class	1	2	3	4

6. **Computer ability:** (1 = poor, 2 = OK, 3 = very good, 4 = Excellent)

➢ Rate your ability to...

a)	Use a simple computer program	1	2	3	4
b)	Use the Internet	1	2	3	4
c)	Use e-mail	1	2	3	4
d)	Use an electronic bulletin board	1	2	3	4
e)	Chat	1	2	3	4
f)	Make a web site	1	2	3	4
g)	Learn new computer skills	1	2	3	4
h)	Relax while working on a computer	1	2	3	4

7. Academic style:

➢ Decide how well the following sentences describe you.

a)	I am self-motivated to learn at school.	Never	Occasionally	Frequently	Always
b)	I am a good student in general.	Never	Occasionally	Frequently	Always
c)	I do well in English classes.	Never	Occasionally	Frequently	Always
d)	I prefer to work alone.	Never	Occasionally	Frequently	Always
e)	I prefer to work with other students.	Never	Occasionally	Frequently	Always
f)	I am a good learner.	Never	Occasionally	Frequently	Always
g)	I do my homework in English.	Never	Occasionally	Frequently	Always
h)	Group work helps me with my work.	Never	Occasionally	Frequently	Always
i)	I am uncertain when I have to speak English.	Never	Occasionally	Frequently	Always
j)	I work hard to improve my English.	Never	Occasionally	Frequently	Always
k)	I find working alone boring.	Never	Occasionally	Frequently	Always
l)	I prefer working alone.	Never	Occasionally	Frequently	Always
m)	I am shy.	Never	Occasionally	Frequently	Always
n)	I feel very anxious when speaking English.	Never	Occasionally	Frequently	Always
o)	I like to learn.	Never	Occasionally	Frequently	Always
p)	English classes make me nervous.	Never	Occasionally	Frequently	Always
q)	I hate English classes.	Never	Occasionally	Frequently	Always

8. Preferences:

➢ Do you like

a)	Learning English?	Not at all	A little	A lot	Very much
b)	Doing activities to practice your English?	Not at all	A little	A lot	Very much
c)	Working on computers?	Not at all	A little	A lot	Very much
d)	Using the Internet?	Not at all	A little	A lot	Very much
e)	Working alone on a project at school?	Not at all	A little	A lot	Very much
f)	Working in a group on a project at school?	Not at all	A little	A lot	Very much
g)	Going to school?	Not at all	A little	A lot	Very much
h)	Working on language learning tasks?	Not at all	A little	A lot	Very much
i)	Practising your English with other students?	Not at all	A little	A lot	Very much
j)	Studying English grammar?	Not at all	A little	A lot	Very much
k)	Speaking in English?	Not at all	A little	A lot	Very much

9. What is the reason you are studying English right now?

Rank the following sentences from 1 to 10 (In other words, **give each one a different number**: 1 is for your first and most important reason and 10 is for your last and least important reason.) **Do not use a number more than once.**

➢ I am studying English because…

a) _____ It is compulsory to my program (I have to).
b) _____ I like it.
c) _____ I think it will help me get a good job.
d) _____ I want to be able to speak or write it better.
e) _____ I want to be able to understand English movies or TV shows.
f) _____ I need it in my job.
g) _____ I want to be able to understand English music.
h) _____ I want to learn more about the English culture and people.
i) _____ I want to travel.
j) _____ I want to be able to make friends with English people.

Appendix 5: Post-Questionnaire for the Experimental Participants

Questionnaire #2 Number: _____ Group: _____

1. Habits:

a)	Watch TV in English?	*Never*	*Occasionally*	*Frequently*	*Always*
b)	Watch movies in English?	*Never*	*Occasionally*	*Frequently*	*Always*
c)	Listen to the radio in English?	*Never*	*Occasionally*	*Frequently*	*Always*
d)	Read in English?	*Never*	*Occasionally*	*Frequently*	*Always*
e)	Speak socially in English?	*Never*	*Occasionally*	*Frequently*	*Always*
f)	Speak English at work?	*Never*	*Occasionally*	*Frequently*	*Always*

2. English ability: Rate your ability to... *(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)*

a)	Read newspapers & magazines in English	1	2	3	4
b)	Read books in English	1	2	3	4
c)	Write letters in English	1	2	3	4
d)	Write an essay in English	1	2	3	4
e)	Speak English to classmates	1	2	3	4
f)	Speak English in social situations (i.e. at a party)	1	2	3	4
g)	Use English on the job	1	2	3	4
h)	Use correct English grammar	1	2	3	4
i)	Relax while speaking English	1	2	3	4
j)	Do well in English class.	1	2	3	4

3. Computer ability: Rate your ability to... *(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)*

a)	Use a simple computer program	1	2	3	4
b)	Use the Internet	1	2	3	4
c)	Use e-mail	1	2	3	4
d)	Use an electronic bulletin board	1	2	3	4
e)	Chat	1	2	3	4
f)	Make a web site	1	2	3	4
g)	Learn new computer skills	1	2	3	4
h)	Relax while working on a computer	1	2	3	4

4. Learning style: Decide how well the following sentences describe you.

a)	I am self-motivated to learn at school.	*Never*	*Occasionally*	*Frequently*	*Always*
b)	I am a good student in general.	*Never*	*Occasionally*	*Frequently*	*Always*
c)	I do well in English classes.	*Never*	*Occasionally*	*Frequently*	*Always*
d)	I prefer to work alone.	*Never*	*Occasionally*	*Frequently*	*Always*
e)	I prefer to work with other students.	*Never*	*Occasionally*	*Frequently*	*Always*
f)	I am a good learner.	*Never*	*Occasionally*	*Frequently*	*Always*
g)	I do my English homework.	*Never*	*Occasionally*	*Frequently*	*Always*
h)	Group work helps me with my work.	*Never*	*Occasionally*	*Frequently*	*Always*
i)	I am uncertain when I have to speak English.	*Never*	*Occasionally*	*Frequently*	*Always*
j)	I work hard to improve my English.	*Never*	*Occasionally*	*Frequently*	*Always*
k)	I find working alone boring.	*Never*	*Occasionally*	*Frequently*	*Always*
l)	I enjoy classes.	*Never*	*Occasionally*	*Frequently*	*Always*
m)	I am shy.	*Never*	*Occasionally*	*Frequently*	*Always*
n)	I feel very anxious when speaking English.	*Never*	*Occasionally*	*Frequently*	*Always*
o)	I like to learn.	*Never*	*Occasionally*	*Frequently*	*Always*
p)	English classes make me nervous.	*Never*	*Occasionally*	*Frequently*	*Always*
q)	I don't like English classes.	*Never*	*Occasionally*	*Frequently*	*Always*
r)	I find it easy to make friends	*Never*	*Occasionally*	*Frequently*	*Always*

5. Comfort level: Decide how well the following sentences describe you.

a) I like to edit my work before others see it.	*Never*	*Occasionally*	*Frequently*	*Always*
b) I prefer to deal with English at a distance (for example: Over the Internet).	*Never*	*Occasionally*	*Frequently*	*Always*
c) I start conversations with strangers (in French).	*Never*	*Occasionally*	*Frequently*	*Always*
d) I start conversations with strangers (in English).	*Never*	*Occasionally*	*Frequently*	*Always*
e) I am comfortable speaking English in a group.	*Never*	*Occasionally*	*Frequently*	*Always*

6. Preferences: Do you like...

a)	Learning English?	*Not at all*	*A little*	*A lot*	*Very much*
b)	Learning languages in general?	*Not at all*	*A little*	*A lot*	*Very much*
c)	Working on computers?	*Not at all*	*A little*	*A lot*	*Very much*
d)	Using the Internet?	*Not at all*	*A little*	*A lot*	*Very much*
e)	Working alone on a project at school?	*Not at all*	*A little*	*A lot*	*Very much*
f)	Working in a group on a project at school?	*Not at all*	*A little*	*A lot*	*Very much*
g)	Learning in general?	*Not at all*	*A little*	*A lot*	*Very much*
h)	Going to school?	*Not at all*	*A little*	*A lot*	*Very much*

7. What is the reason you are studying English right now? Rank the following sentences from 1 to 10 (In other words, give each one a different number: 1 is for your first and most important reason and 10 is for your last and least important reason.)

I am studying English because...

_____ It is compulsory to my program.
_____ I like it.
_____ I want to get a good job.
_____ I want to be able to speak it better.
_____ I want to be able to write it better.
_____ I want to be able to go to English movies.
_____ I want to be able to talk with native English speakers.
_____ I need it in my job.
_____ It fits my schedule.
_____ I want to be able to watch TV or listen to the radio in English.

8. a) Which of the class activities did you <u>prefer</u>? Rank the following activities from 1 to 10 (In other words, give each one a different number: 1 is for the activity you <u>found the most useful</u> and 10 is for the activity you <u>found the least useful</u>.)

_____ the personal journal writing
_____ the listening exercises
_____ speaking in small groups in class
_____ working in groups
_____ the field-of-study final project
_____ the resumé and cover letter project
_____ the dictionary work
_____ the reading selection work
_____ the job interview role play
_____ the grammar exercises

8. b) Which activity did you rank number one? Why?

_____

_____

8. c) Which activity did you rank number ten? Why?

_____

_____

Using the bulletin boards:

9. Circle the information that best reflects how you feel.

a) At first, learning to use the bulletin board was _____ .

Easy *Not too bad* *Quite hard* *Extremely hard*

b) At first, I was _____ with using the bulleting board.

very uncomfortable *a bit uncomfortable* *mostly comfortable* *very comfortable*

c) I became comfortable with using the bulletin board. *Not at all* *A little* *A lot* *Very much*

d) My overall English ability has _____ by using the bulletin board to do projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

Please explain your answer and include examples. _____

_____

e) My English vocabulary has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

f) My English writing has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

g) My English reading has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

h) My English speaking has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

i) My English listening ability has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

j) My English grammar has _____ by using the bulletin board.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

10. Please answer and explain.

a) Have you learned anything about your field of study through the bulletin board projects? *YES* *NO*

Please explain. _____

b) b) Did you work with people from your field of study on your final project? *YES* *NO*

Please explain. _____

b) Did you work with anyone from another class on your final project? *YES* *NO*

Please explain. _____

c) What approximate percent % of your final project did your group plan or prepare using the bulletin board?

Please give a reason for the percentage. _____

d) Did you benefit from working in a group on the final project? *Not at all* *A little* *A lot* *Very much*

Why or why not? _____

e) What else would improve the bulletin board experience for you? Please give your suggestions.

_____

_____

Appendix 6: Post-Questionnaire for the Comparison Participants

Questionnaire #2 Number:_____ Group:_____

1. Habits:

a)	Watch TV in English?	*Never*	*Occasionally*	*Frequently*	*Always*
b)	Watch movies in English?	*Never*	*Occasionally*	*Frequently*	*Always*
c)	Listen to the radio in English?	*Never*	*Occasionally*	*Frequently*	*Always*
d)	Read in English?	*Never*	*Occasionally*	*Frequently*	*Always*
e)	Speak socially in English?	*Never*	*Occasionally*	*Frequently*	*Always*
f)	Speak English at work?	*Never*	*Occasionally*	*Frequently*	*Always*

2. English ability: Rate your ability to... *(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)*

a)	Read newspapers & magazines in English	1	2	3	4
b)	Read books in English	1	2	3	4
c)	Write letters in English	1	2	3	4
d)	Write an essay in English	1	2	3	4
e)	Speak English to classmates	1	2	3	4
f)	Speak English in social situations (i.e. at a party)	1	2	3	4
g)	Use English on the job	1	2	3	4
h)	Use correct English grammar	1	2	3	4
i)	Relax while speaking English	1	2	3	4
j)	Do well in English class.	1	2	3	4

3. Computer ability: Rate your ability to... *(1 = poor, 2 = OK, 3 = very good, 4 = Excellent)*

a)	Use a simple computer program	1	2	3	4
b)	Use the Internet	1	2	3	4
c)	Use e-mail	1	2	3	4
d)	Use an electronic bulletin board	1	2	3	4
e)	Chat	1	2	3	4
f)	Make a web site	1	2	3	4
g)	Learn new computer skills	1	2	3	4
h)	Relax while working on a computer	1	2	3	4

4. Learning style: Decide how well the following sentences describe you.

a)	I am self-motivated to learn at school.	*Never*	*Occasionally*	*Frequently*	*Always*
b)	I am a good student in general.	*Never*	*Occasionally*	*Frequently*	*Always*
c)	I do well in English classes.	*Never*	*Occasionally*	*Frequently*	*Always*
d)	I prefer to work alone.	*Never*	*Occasionally*	*Frequently*	*Always*
e)	I prefer to work with other students.	*Never*	*Occasionally*	*Frequently*	*Always*
f)	I am a good learner.	*Never*	*Occasionally*	*Frequently*	*Always*
g)	I do my English homework.	*Never*	*Occasionally*	*Frequently*	*Always*
h)	Group work helps me with my work.	*Never*	*Occasionally*	*Frequently*	*Always*
i)	I am uncertain when I have to speak English.	*Never*	*Occasionally*	*Frequently*	*Always*
j)	I work hard to improve my English.	*Never*	*Occasionally*	*Frequently*	*Always*
k)	I find working alone boring.	*Never*	*Occasionally*	*Frequently*	*Always*
l)	I enjoy classes.	*Never*	*Occasionally*	*Frequently*	*Always*
m)	I am shy.	*Never*	*Occasionally*	*Frequently*	*Always*
n)	I feel very anxious when speaking English.	*Never*	*Occasionally*	*Frequently*	*Always*
o)	I like to learn.	*Never*	*Occasionally*	*Frequently*	*Always*
p)	English classes make me nervous.	*Never*	*Occasionally*	*Frequently*	*Always*
q)	I don't like English classes.	*Never*	*Occasionally*	*Frequently*	*Always*
r)	I find it easy to make friends	*Never*	*Occasionally*	*Frequently*	*Always*

5. Comfort level: Decide how well the following sentences describe you.

a) I like to edit my work before others see it.	*Never*	*Occasionally*	*Frequently*	*Always*
b) I prefer to deal with English at a distance (for example: Over the Internet).	*Never*	*Occasionally*	*Frequently*	*Always*
c) I start conversations with strangers (in French).	*Never*	*Occasionally*	*Frequently*	*Always*
d) I start conversations with strangers (in English).	*Never*	*Occasionally*	*Frequently*	*Always*
e) I am comfortable speaking English in a group.	*Never*	*Occasionally*	*Frequently*	*Always*

6. Preferences: Do you like...

a)	Learning English?	*Not at all*	*A little*	*A lot*	*Very much*
b)	Learning languages in general?	*Not at all*	*A little*	*A lot*	*Very much*
c)	Working on computers?	*Not at all*	*A little*	*A lot*	*Very much*
d)	Using the Internet?	*Not at all*	*A little*	*A lot*	*Very much*
e)	Working alone on a project at school?	*Not at all*	*A little*	*A lot*	*Very much*
f)	Working in a group on a project at school?	*Not at all*	*A little*	*A lot*	*Very much*
g)	Learning in general?	*Not at all*	*A little*	*A lot*	*Very much*
h)	Going to school?	*Not at all*	*A little*	*A lot*	*Very much*

7. What is the reason you are studying English right now? Rank the following sentences from 1 to 10 (In other words, give each one a different number: 1 is for your first and most important reason and 10 is for your last and least important reason.)

I am studying English because...

_____ It is compulsory to my program.
_____ I like it.
_____ I want to get a good job.
_____ I want to be able to speak it better.
_____ I want to be able to write it better.
_____ I want to be able to go to English movies.
_____ I want to be able to talk with native English speakers.
_____ I need it in my job.
_____ It fits my schedule.
_____ I want to be able to watch TV or listen to the radio in English.

8. a) Which of the class activities did you prefer? Rank the following activities from 1 to 10 (In other words, give each one a different number: 1 is for the activity you found the most useful and 10 is for the activity you found the least useful.)

_____ the personal journal writing
_____ the listening exercises
_____ speaking in small groups in class
_____ working in groups
_____ the field-of-study final project
_____ the resumé and cover letter project
_____ the dictionary work
_____ the reading selection work
_____ the job interview role play
_____ the grammar exercises

8. b) Which activity did you rank number one? Why?

_____

_____

8. c) Which activity did you rank number ten? Why?

_____

_____

Group work (Reading selections, vocabulary lists, final projects):

9. Circle the information that best reflects how you feel.

d) My overall English ability has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

Please explain your answer and include examples.

_____

_____

e) My English vocabulary has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

f) My English writing has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

g) My English reading has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

h) My English speaking has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

i) My English listening ability has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

j) My English grammar has _____ by doing the group projects.

not improved at all *improved a little* *improved quite a bit* *improved a lot*

10. Please answer and explain.

a) Have you learned anything about your field of study through the group projects? *YES* *NO*

Please explain. _____

b) Did you work with someone from your field of study on your final project? *YES* *NO*

Please explain. _____

c) What approximate percent % of your final project did your group plan or prepare together?

Please give a reason for the percentage. _____

_____

d) Did you benefit from working in a group on the final project? *Not at all* *A little* *A lot* *Very much*

Why or why not? _____

e) What else would improve the group work experience for you? Please give your suggestions.

_____

_____

Appendix 7: BB data from the Animation forum

Animation : Introductions

Recommend (1 recommendation so far)	Delete	Message 2 of 5 in Discussion

From: Participant 1 – Class 2 Sent: 27/01/2003 12:59 PM

Hi to all of my friends!! I'm Catherine Rocheleau and I study in 2d animation. I am gonna finish my third year in May and I'll graduate next year. And you, in what fields are you studing? Are you enjoing study at cvm? the atmosphere is very smooth and people are kind. The course I like the most is anatomy because we draw live models and we learn a lot about the human body. I don't have any courses that I hate but I woud say that my 3D animation course is the most difficult. Well, it's time to say goodbye!!

Recommend (1 recommendation so far)	Delete	Message 3 of 5 in Discussion

From: Participant 2 – Class 1 Sent: 30/01/2003 10:20 AM

Hi, my name is Guillaume Morin. I studing classical animation and it's my final session. I love to draw, but it's a field-of-study very demanding for everyone of us. So, how do you think you will survive all the work you will have to do? And I wonder how many session you have done. I don't have a favorite course in particular. I like all of them. But the only thing that get on my nerve is the stupid computers!!! So, goodbye, and see you soon.

Recommend (1 recommendation so far)	Delete	Message 4 of 5 in Discussion

From: Participant 2 – Class 1 Sent: 30/01/2003 10:29 AM

Hey hey!!!! It's Catherine Rocheleau!! Hi!! It's Guillaume Morin!!! I think we know each others!!! hahaha!! I will answer yours questions. I'm studying in 2d animation like you. And I love to study at CVM. But now, I'm kinda tired of the hours in the metro and buses... So my motivation to go to school is not very high. But like you, I think that most of the peolple are 'cool'. I think that we'll be doing our projet together. Yeah!! That's perfect, someone I know!!! I will go now. Good day!! And see you tomorrow!!

Reply	Recommend (1 recommendation s	Delete	Message 5 of 5 in Discussion

From: Participant 1 – Class 2 Sent: 10/02/2003 12:29 PM

yo morinheihts!!! hope youre not frustrated i call you Morinheihts. If i do, i'm sorry and i promise to not ever call you MORINHEIHTS again. Well, as you can see, i'm in my English course and it sucks. Just to give you an idea, the course has begun since fourty minutes and the teacher didn't begin to give any instructions. All the students just don't know what to do !! Funny hey! It's so boring, and you're even not

there to answer me .... mmmmmm mm mmm mmmm mmmmmm mmmm mm m mmm mmmm mm m m mmm... yes yes , I'm singing and I'm talking alone... hooop, the teacher is talkin for the first time today!! yahoo!! so...see you later and have a nice day!!

BBYE!!

CAt

Figure 31. BB data from Animation: Introductions page.

Animation : Reading Selection

Recommend **Delete** Message 2 of 13 in Discussion

From: Participant 2 – Class 1 Sent: 14/02/2003 12:25 PM

http://www.nfb.ca/flux/

With what, Chris Hinton, plays with deft dark humour?
Witch film Chris animated and directed as an independent filmmaker?
Where she taught animation course?
When "Flux" won the "Jury's Award Film Festival"?
Who did the Re-recording of this movie?
In what city "Flux" will be screenings on February 18??

--

Recommend **Delete** Message 3 of 13 in Discussion

From: Participant 1– Class 2 Sent: 17/02/2003 11:39 AM

www.pascalblais.com

Go in ***NEW*,** then choose the first article about Coca-Cola

COCA-COLA ADVERTISING

1) Against whom P.B. Prod. competed with ?

2) In how many countries the AD has been diffused?

3) From whom artist Santa' s image has been inspired?

4) Who directed the AD?

5) What did Coca-Cola saw to be convinced by P.B.Prod.?

6) How much time did the AD took to product?

Recommend **Delete** Message 4 of 13 in Discussion

From: Participant 2– Class 1 Sent: 20/02/2003 10:20 AM

Hi –,

Thank you very much to put your questions this week, because I don't have something else to do in the course today.

So here the response. I hope I will have a good mark. héhéhé
1-P.B. Prod. went up against major commercial animators around the world, including George Lucas's Industrial Light and Magic.
2-The AD has been diffused in the United States, Canada and dozens of other countries in Latin America, Europe and Asia.
3-By the ubiquitous Sundblom paintings.
4-Pascal Blais directed the AD.
5-They saw a sample of the animated Santa.
6-It took two and a half months to created the spot.
There you go. Don't be to hard on myself.
Seeya
--

Reply **Recommend** **Delete** Message 6 of 13 in Discussion

From: Participant 1– Class 2 Sent: 28/02/2003 2:05 PM

My dear --,
Hello and I hope you have a great time

What ever here are the answers to your questions. I hope they are all right.
1) Chris plays with the speed of life
2) The Gift (1981), Firecan (1983), A Peice of the Action (1983), A Nice Day in the Country (1988)
3) "SHE" taught her courses at San Francisco State University Animation
4)In Tallin, Estonia in November 2002
5) Jean Paul Vialard And Shelley Craig did the re-recording
6) In vancouver
And here are the answers of my questions
1)Lucas
2)12 Countries
3)The oli painter Sundbloom
4)Alex Petrov directed the Ad.
5) The old man and the sea
6) It took 2 and half months to produce

Reply	Recommend	Delete	Message 7 of 13 in Discussion

From: Participant 2– Class 1 Sent: 04/03/2003 1:57 PM

Wow --,

You answered correctly to all of my questions. You're a pro!!!!!
I don't know what to give you... OH! I know what will be your prize.
It will be a big kiss!!! LOL Here you go!!

Si good bye and have a nice day!!!
--

Recommend	Message 8 of 13 in Discussion

From: Participant 1– Class 2 Sent: 17/03/2003 12:35 PM

This message has been deleted by the author.

Recommend	Delete	Message 9 of 13 in Discussion

From: Participant 2– Class 1 Sent: 17/03/2003 1:00 PM

Here the second questions:

Go to: http://www.richardrosenman.com/index.htm

after that, go to "INFO" and then "Press" And finally click on :
Josell Communications Inc. - TOPIX/MAD DOG flavors international Alka-Seltzer campaign for BBDO Mexico

1- What is the phone number for more information?
2- When does the tags will be airing in Mexico?
3- What does the lime unreveals its peel the first time?
4- Wha is the essence of these spots?
5- Who is the director of animation?
6- Who did complete the the music and audio?

That's should be easy. So good luck!!!
--

Recommend	Delete	Message 10 of 13 in Discussion

From: Participant 1– Class 2 Sent: 23/03/2003 10:18 AM

Hi --!!!
Here are the answers to your questions

1-Soooooo, if I want more informations, I just have to call at (212) 877-5560
2-The tags will be airing in late July

3-The lime unravels its peel to reveal the ultimate gastronomic panacea(an Alka-Selter tablet)
4-The essence would be Stylized realism
5-Richard Rosenman, the site "s owner, directed the animation
6-I didn"t found the one who completed the audio, so I would guess its Colin Withers

well bye bye!

Recommend Delete Message 11 of 13 in Discussion

From: Participant 1– Class 2 Sent: 23/03/2003 10:39 AM

Hi --!
so here are the questions about a Tarzan site.
So you just have to go on the site : www.Manton.org/tarzan/
Read the SOUNDTRACK and the ANIMATION parts and then you will be able answer my answers.

GUD LOK!!!
1-Who have written the songs for Tarzan?
2- Who was the Tarzan"s Master animator?
3-Who have written the first original Tarzan?
4- What others characterGlen Keane animate?
5- Where was Keane when he worked on Tarzan?
6- How is called the new tecnique that they used on Tarzan backgrounds?

Recommend Delete Message 12 of 13 in Discussion

From: Participant 2– Class 1 Sent: 24/03/2003 1:38 PM

Hello --!!!
I will answer your question then I will correct your answers. So my homework will be done!!
1-Phil Collins wrote the songs for the Tarzan movie.
2-The master animator behind the star of the film is none other than Glen Keane.
3-The classic Tarzan books are by Edgar Rice Burroughs.
4-He animated Ariel, the Beast, Aladdin, and Pocahontas.
5-He worked on Tarzan in Paris.
6-It's called "deep-canvas".

Here it is for the answer of your questions.
I will correct your anwsers.
Your answers are all correct except for the last one... But it was my mistake. I didn't write the questions correctly. The question was syppose to be that:
6- Where did the the music and audio was complete??
answer: at Manatthan Beat(Mexico city)

So that is all for toda. Ciao!!!!
--

Recommend	Delete	Message 13 of 13 in Discussion
From: Participant 1– Class 2		Sent: 31/03/2003 10:22 AM

Congratulations --!!!!
You answered correctly to All my questions!!
So I guess I don't have to give the aswers...

I'm so proud of you! here a little tear of joy.

By the way i'd like to thank you for the talk that we've got last friday in the anatomy course. It's good to know I'm not alone thining that kind of things.. If you dont remember it doesnt matter because I do remember. Well, tata!!!

Figure 32. BB data from Animation: Reading selection page.

Animation : Proposals

Recommend	Delete	Message 2 of 4 in Discussion
From: Participant 2– Class 1		Sent: 09/04/2003 10:48 AM

My name is -- and here's my proposal.

Our teachers wants to know what Old Montreal landmark illustrates somethings taht is connected to our feild of study. Ols Montreal is very big, so were could we find somethig that illustrates a controversy in classical animation?
So something came to my mind. We could talk about the biggest controversy in animation ever done. We could talk about "Cinar". Cinar is a studio that stole money from the government. We can not find a bigger controversy then that. We could talk about the history of the studio, and the people who are working there. We could talk about the projects that they have done. And finally, talk about the controversy around the studio. And to find information regardaing that studio, we can ask our teachers who knows all about it, and we can search the Intrnet too.

It is all. Thanks.

0 recommendations	Message 3 of 4 in Discussion
From: Participant 1– Class 2	Sent: 16/04/2003 11:45 PM

This message has been deleted by the author.

Reply	0 recommendations	Message 4 of 4 in Discussion
From: Participant 1– Class 2		Sent: 17/04/2003 12:05 AM

This message has been deleted by the author.

Figure 33: BB data from Animation: Proposals page.

Animation : Vote!

Recommend **Delete** Message 2 of 3 in Discussion

From: Participant 2– Class 1 Sent: 11/04/2003 12:46 PM

I vote for the proposal of [Participant 1].

She gave it to me on a piece of paper.

--

Recommend **Delete** Message 3 of 3 in Discussion

From: Participant 1– Class 2 Sent: 14/04/2003 2:11 PM

Being only two persons in the same field of study, I don't have the choice to vote to my big friend [Participant 2] because I can' vote for me. My proposal insn't on-line but I gave it to [Participant 2] and I gave a copy to Norm. But, if I could, I would vote for my prposal (this is totally unpretencious....) because it feel more complete, clear and easy to resolve. Unfortunately, I think that [Participant 2] 's proposal does include a problem (controversy) but doesn't give a solution. In addition, the plan looks a little bit vacant.

Please vote for me !!! hahaha!! --

Figure 34: BB data from Animation: Vote page

Animation : Final Project

Recommend **Delete** Message 2 of 2 in Discussion

From: Participant 2– Class 1 Sent: 01/05/2003 11:00 AM

Hi --,

Just to inform Norm and Caroline.
We met in our class and we decide what part we will do.

-- I need your help. I remember that I'm going to talk about the projects they do, the interview... and I don't remember what is the other thing.
I know, you talk about the porte-folio... and what are the other stuff...
I knew I shoud write it.

And --, can you please decide of the date we will pass the oral. So we can do it together. Thank you in advance!
CIAO!!
--

Figure 35: BB data from Animation: Final project page

Appendix 8: Rankings for Post-Questionnaire, Section 8. b) and c) open-ended questions.

Table 15

Personal journal writing: Reasons for 10th place ranking

	Experimental participants n=59	Comparison participants n=43
Activity	Ranked it 10th	Ranked it 10th
the personal journal writing	15 (25.42%)	22 (51.16%)

	Experimental	Comparison
negative interest	2	3
negative relevance	5	6
negative integrative orientation	2	2
Negative satisfaction	0	1
Negative choice / Autonomy	3	3
Negative effort	1	8
Total qualitative responses	13	23
Total who gave more than one qualitative response	0	2
No qualitative response 8b	2	1
Total quantitative responses 8a	15	22

Table 16

Working in groups: Reasons for 1st place ranking

	Experimental participants n=58	Comparison participants n=43
Activity	Experimental	Comparison
working in groups	9 (15.51%)	2 (4.65%)

	Experimental	Comparison
Positive expectancy	2	0
Positive social orientation	4	0
Positive integrative orientation	1	0
Positive satisfaction	0	1
Total qualitative responses	7	1
Total who gave more than one qualitative response	0	0
No qualitative response 8b	2	1
Total quantitative responses 8a	9	2

Table 17

Job interview assignment: Reasons for 1st place ranking

	Experimental participants n=59	Comparison participants n=43
Activity	Experimental	Comparison
the job interview role play	10 (16.94%)	1 (2.32%)

	Experimental	Comparison
Positive interest	4	1
Positive relevance	4	0
Positive satisfaction	1	0
Positive social orientation	0	1
Total qualitative responses	9	2
Total who gave more than one qualitative response	0	1
No qualitative response 8b	1	0
Total quantitative responses 8a	10	1

Table 18

Field-of-study project (assignment #6): Reasons for 10th place ranking

	Experimental participants n=59	Comparison participants n=43
Activity	Experimental	Comparison
the field-of-study final projec	13 (22.03%)	1 (2.32%)

	Experimental	Comparison
External stress	4	0
Task stress	2	0
Negative Interest	2	0
Negative relevance	2	0
Negative integrative orientation	1	0
Alone in field of study	1	0
Total qualitative responses	12	0
Total who gave more than one qualitative response	0	0
No qualitative response 8b	1	1
Total quantitative responses 8a	13	1