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Second Language Writing Anxiety, Computer Anxiety,

Motivation and Performance in a Classroom versus

a Web-based Environment

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By

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Abstract

This study examined the impact of writing anxiety, computer anxiety and motivation on language learning for 45 ESL adult learners enrolled in an English grammar and writing course. Two sections of the course were offered in a traditional classroom setting whereas two others were given in a hybrid form that involved distance learning. Contrary to previous research (Pajares, 2003; Pajares & Valiante, 1996), writing anxiety showed no correlation with learning performance, whereas computer anxiety only yielded a positive correlation with performance in the case of classroom learners. There were no significant differences across learning environments on any measures. These results are explained in light of the role computer technologies now play in our society as well as the merging of socio-demographic profiles between classroom and distance learners. Our data suggest that comparisons of profiles between classroom and distance learners may not be an issue worth investigating anymore in language studies, at least in developed countries.

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1. Introduction

It has been suggested by researchers that students in Distance Learning (DL) settings may have a somewhat different profile from students in traditional classroom settings, and possibly take distance language courses because of their reluctance to interact with their peers in the classroom (e.g., Pichette, 2009). Given that second language (L2) students may be particularly anxious about oral interaction in the target language, they may opt to take distance courses because DL courses presuppose interaction primarily in the written form. Therefore, it can be speculated that distance L2 learners know that written communication is required in distance courses, and opt for such courses because, although anxious people will tend to feel anxiety for any type of communication, they are less anxious about writing than they are about speaking. Furthermore, the DL environment may perhaps be more motivating because it provides an arena for interaction and collaboration with others without the anxiety that is related to oral interaction in the classroom setting.

Although several factors, such as for example distance from an educational institution and time constraints, have been investigated as reasons for choosing DL over traditional classroom instruction, surprisingly, anxiety has only recently begun to be considered as one of them (Pichette, 2009; Hurd, 2007). In general, anxiety is triggered among some learners by

face-to-face interaction, and research shows that it becomes much more pronounced when that interaction takes place in a foreign language. A more specific form of anxiety, second/foreign language anxiety is defined as the arousal of worry and negative emotions when one is learning or is using another language (Gardner & MacIntyre, 1993). Because self-identity is tied to language and communication (Horwitz, 1995), communicating in a new language can be frustrating and anxiety-producing. Learning a new language engages the identity of the learner because, in addition to the new linguistic system of signs ad symbols, a new language involves learning new complex social practices. The value and meaning of a word or phrase in a new language is determined in part by the value and meaning ascribed to it by the learner (Norton & Toohey, 2004) in reference to his own social practice. Consequently, the learner may feel anxious about his interpretation of utterances in the new language, and may feel threatened and/or frustrated by the limited expression that can be communicated in the target language. He may feel that his "true" self is not being presented, but a rather "limited" self because he is not very familiar with the social practices of the new language and not well versed in the target language itself. Fear of ridicule in any form of communication in L2, as suggested by Pichette (pers. comm. 17/08/08), may be a source of L2 anxiety as well, perhaps even more so than the notion of "limited" self.

More generally, research in L2 acquisition over the last three decades has pointed to three affective factors as likely to notably influence student performance in DL: writing anxiety, computer anxiety, and motivation. This study will examine whether relationships exist between these variables and ESL performance, and, whether these variables show different correlations in classroom and Web-based learning environments.

Many universities are currently striving to diversify the way their courses are offered, especially through distance learning. McGill University is no exception to this trend, and it was decided in our department that an advanced-level writing course -*CEEN 411 Grammar and Writing Techniques*- would be offered in a hybrid/blended learning format in addition to its traditional classroom learning format. This presented a great opportunity for me to combine my work and research interests and conduct a study on affective issues surrounding this new hybrid course. No such study had ever been undertaken by McGill University, so there was a great interest, besides my own, in its findings.

Not only will the findings from this study help me develop research skills, but they will help the Department of English and French Language Programs better understand L2 writing anxiety, computer anxiety and motivation in classroom and web-based settings, incorporate learning

strategies to help students cope with motivation issues, writing and computer anxiety, and modify the learning environments (distance and classroom) as needed.

The study that led to this thesis has been published in the first issue of the new journal *Studies in Second Language learning and Teaching* (Dracopoulos & Pichette, 2011).

2. Theoretical framework

2.1. Constructivist Influences on Learning

This study is based on constructivist theories of learning. Constructivism, following the principles of Dewey, Piaget and Vygotsky, acknowledges the learner's active role in the personal creation of knowledge through biological, neurological, social, cultural, and linguistic interactions. It also acknowledges the importance of individual and social experience. Constructivism acknowledges that the knowledge created will vary in its degree of validity as an accurate representation of reality. It is based on the belief that learning is a type of "mental construction" in which the learner fits the new knowledge into his already existing knowledge base. The learner actively constructs meaning from the context of an idea or concept by drawing from his own prior knowledge, experience, beliefs and attitudes. In short, "generating" new knowledge is possible when the new information can be related to already existing knowledge in the person's mind.

Reflecting on a subject forces us to bring to our immediate awareness our past experiences, attitudes, beliefs and feelings about the subject. The effects of prior knowledge require a change from the view that learning is the acquisition of knowledge, to the view that learning is a conceptual change that leads the learner to shift his **prior knowledge** in order to accommodate and incorporate a new idea or concept. This notion of prior

knowledge as a necessary basis for developing new knowledge has been popularized as the Schema Hypothesis, first introduced by Sir Frederic Bartlett (1932) and later developed by psychologist Richard C. Anderson (1984). It views organized knowledge as an elaborate network of abstract mental structures which represent one's understanding of the world (Anderson, 1977). Anderson postulates that people use schemata to organize current knowledge and provide a framework for future understanding. Consequently, schemata change as new information is internalized. Since deep-seated schemata, which represent the foundations of one's knowledge base, may be hard to change, learners may feel internal conflict if they are trying to assimilate information which contradicts their previous suppositions and deeply-held values and beliefs (Lewis, 2009). Learning a second language may require the learner to make a paradigm shift in his basic assumptions about the world and in the ways he sees, conceives, and talks about the world. This shift will be necessary because of the new information he has acquired about the new language and culture. In time, the learner will transform his prior knowledge (or schemata) to accommodate the new ideas and concepts of the new language and culture, (Posner, Strike, Hewson, & Gertzog, 1982) thus modifying his mental constructions, and, ultimately, generating his own. In other words, this whole perspective on learning sees that process not as the simple addition of knowledge on top of what is already known, but results in the modification of such prior knowledge. This hypothesis explains the fact that even the most fundamental components of our personality such as our values and

attitudes can change over time as new acquired information is compounded with prior knowledge.

Among the constructivist approaches, social constructivism is the most pertinent to this study because it emphasizes the co-construction of meaning within a social activity, and is more concerned with meaning than with construction. It underscores the social nature of knowledge and the belief that knowledge is the result of social interaction and language use. Knowledge is viewed as a shared rather than as an individual experience, and reality is socially constructed and agreed upon by those participating in the (communicative) socio-cultural activity. Furthermore, since social interaction takes place within a socio-cultural context, the resulting knowledge is bound by a specific time and place (Vygotsky, 1978). In his Social Development Theory, Vygotsky puts forth the idea that human learning presupposes a specific social nature and is part of a process by which children grow into the intellectual life of those around them (Vygotsky, 1978). In his hypothesis dubbed the Zone of Proximal Development, he observed that when children worked with adults, the process of engagement with the adult enabled them to refine their thinking or their performance to make it more effective. In other words, he observed a difference between what the children could do on their own, and what they could achieve by interacting with others who were more knowledgeable than they were.

Central to Vygotsky's theory is the social origin of individual mental functioning and language as the critical link between the social and the psychological planes of human functioning. Vygotsky theorized that the social is connected to the psychological, and that learning, or cultural development as he put it, takes place on two planes: first the social and then the psychological (and finally within the learner in the intrapsychological plane or category) (Vygotsky, 1981). To fully understand the focus of this study, it is important to mention that in the theory of situated cognition, Vygotskian thought emphasizes the social formation of the mind. The activities of a person and the environment are considered parts of a mutually constructed whole. This implies that the dynamic social environment, which provides the context for meaningful learning, has a profound impact on the learner. Similarly, this dynamic can be a catalyst for affective issues such as anxiety or feelings of inadequacy to surface and, potentially, lead to learning difficulties.

Constructivist principles and teaching strategies have been applied in L2 teaching for many years in the form of cooperative group work, for example, or thematic instruction, project-oriented learning, problem-solving activities, active use of material to be learned, and a more learner-centered pedagogy. Yet, little emphasis has been placed on the **learning environment** and the **affective state of the learner within it**. The authenticity of the language learning environment and the affinity that

participants feel toward one another are essential elements in making the learner feel part of this environment and comfortable in it. Consequently, the environment is not simply a resource, but the source of development within which communicative activity plays a central role in the co-construction of knowledge (Lantolf & Thorne, 2006). The web-based learning environment may be a possible platform for situated learning, and since web-based learning is fundamentally not constrained by specific locations and classrooms, it can be incorporated into varying learning situations. Furthermore, a web-based learning environment designed to enhance learner social interaction and perceived by the learner as friendly and non-threatening may help the language learner feel at ease and overcome his inhibitions and insecurities about communicating in the new language.

Regardless of the environment, having learners interact socially in classroom or web-based activities such as discussions, question answering, and/or problem-solving does not automatically guarantee successful knowledge construction. It is language and the articulation of ideas that is central to both the socially constructed experience in any given environment and to learning and development. It is widely accepted by scholars that the social process heavily influences the creation of knowledge (Leonard-Barton, 1995) and that the interpersonal relationships of the individuals engaging in the interaction positively influence the quality of the knowledge created (Chua, 2002). The social interactions that occur take many forms

depending on the situation and the medium of communication. For example, whether through physical means such as a classroom setting, or through electronic means such as in a distance learning course, where learners interact through email, chats, or web-conferences, the quality of their interactions and the resulting knowledge created through their interactions will be influenced by the structural, relational, and cognitive dimensions of their exchanges (Nahapiet & Goshal, 1998). The structural dimension includes the presence or absence of social ties with other learners or members of a particular group. Social ties constitute channels of information, and *who one knows* may invariably affect *what one knows* (Coleman, 1988). The degree to which one cares about, is comfortable with, and is trusting of the other based on the history of their personal interactions is key in terms of the relational dimension of social interaction. In particular, the level of care, the norms of cooperation among the members, and the sense of identification to a group give rise to a set of behaviours that include mutual trust, active empathy, active help and leniency in judgment (Von Krogh, 1998). How one feels about and what one believes about his relationship with a fellow learner are very important in creating a level of trust in which interactions can take place without fear of judgment or ridicule. Furthermore, a sense of identification with a group enhances concern for the outcome of the learning process, and increases the opportunity for knowledge sharing (Kramer, Brewer & Hanna, 1996).

Nahapiet and Goshal (1998) found that, in terms of the cognitive dimension of the social interaction process, shared representations, interpretations and meanings –a common language in other words, influences the conditions for the sharing and development of knowledge. It is through language that one exchanges and discusses information, gives opinions, and asks questions. The extent to which one shares a common language with other individuals facilitates one's ability to share knowledge and arrive at shared meanings. Conversely, if one does not share the same language with his fellows, or is not proficient in the common language, the interactions of this individual and his access to the information of others will be restricted (Nahapiet & Goshal, 1998).

Similarly, the nature of the learners' metacognitive knowledge, the quality of the learners' strategies and interactions, and the learners' psychological and affective states are critical factors in successful learning outcomes.

Among the many constructivist views, three have raised my interest and have influenced my approach to the problem: Wittrock's Generative Learning Model, Bandura's Self-efficacy Theory, and Krashen's Affective Filter Hypothesis. These various concepts are presented in the following sections.

2.2 The Generative Learning Model

Wittrock's generative model of learning posits that "the mind, or the brain, is not a passive consumer of information. Instead, it actively constructs its own interpretations of information and draws inferences from them" (Wittrock, 1989). The generative model interprets learning primarily as the construction of concrete, specific verbal and imaginal associations, using one's prior experience as part of context for the construction (Wittrock, 1977a). According to Wittrock, learning is a generative process. It relates stimuli to previous experience, previous schemata from which one induces and elaborates meanings and representations. Learning with understanding is the process of transferring previous experience to new events and problems.

In relation to this study, we can hypothesize that the generative process for the construction of knowledge may be hindered by anxiety-provoking memories or feelings (stimuli) directly or indirectly related to the learner's previous experience with learning or communicating in the second/foreign language.

Wittrock's Generative Learning model involves four processes: recall, integration, organization, and elaboration. It is based on the information

processing model in which the learner generates two types of meaningful relationships: 1) among the parts of the information, 2) and the information and one's experience, beliefs, and knowledge. New mental relationships and structures can be built by the learners when they analyze new material, combine this new material with prior knowledge, and articulate how this fits together. Since the focus of the generative learning model is on generating relations, rather than on storing information, it is a functional model rather than a structural one. It focuses on a) learning processes, such as attention; b) motivational processes, such as attribution and interests; c) knowledge creation processes, such as preconceptions, concepts, and beliefs; and d) most importantly, the processes of generation, including analogies, metaphors, and summaries (Wittrock, 1992). This study examines whether affect (i.e. anxiety) plays a role in inhibiting the generative process.

The fundamental premise of the generative learning model is that people tend to generate perceptions and meanings that are consistent with their prior learning. It predicts that learning is a function of the abstract and distinctive, concrete associations which the learner generates between his prior experience, as it is stored in long-term memory, and the stimuli. Cognition is the immediate discovery, awareness, rediscovery, or recognition of information in various forms. Cognition is also comprehension or understanding. Learning with understanding, which is defined by long-term memory plus transfer to conceptually related problems, is a process of

generating semantic and distinctive idiosyncratic associations between stimuli and stored information. (Wittrock, 1977b). Interference with this generative process can stem from the learner's attributes, such as his personality or intellectual characteristics, his emotional or psychological state, etc.

Wittrock suggests that generative learning is a function of memory. Links are generated between the contents of working memory and our knowledge base -our long-term memory, which contains our prior knowledge. If the learner provides an existing link upon which new knowledge can be constructed, the incorporation of that knowledge into the existing structure will be more effective. Working memory can be seen as a place where new ideas are not only placed and erased, but also connected to existing knowledge. Thus, connections are generated, and new constructs are created. The ideas are no longer isolated in a person's working memory and may be used to construct concepts and solutions rather than just be recalled.

The generative learning model implies generating relations between concepts, and generating relations between experience or prior knowledge and new information. Wittrock (1974), as well as other adherents of this model such as Tobias (2010) and Mayor (2010), postulates that each individual actively constructs his own interpretations of information and draws inferences from them. Consequently, insofar as each individual's

experience determines what learning will take place, no two people are going to learn exactly the same things. It stands to reason that if the world in which a person lives is determined by how he interprets the information he is exposed to, how he internalizes that information, and how he relates it to his prior knowledge and life experience, then no two people are going to live in the same world. Their experiences will differ and the internalization of their experiences will be unique. It follows, then, that affective variables, such as anxiety, may inhibit the process of generating relations or may lead to the generation of misconceptions or misrepresentations. By measuring foreign language anxiety and computer anxiety as well as motivation for the hybrid/blended learning course, we may develop a better understanding of the relationship between these affective variables and whether they have an influence on the students' generation of new knowledge as evidenced by their performance in the course.

2.3 Self-efficacy Theory (Social Cognitive Theory)

Beliefs about self-constructs, such as self-efficacy, self-confidence and self-esteem, influence an individual's outlook on life as well as his performance on particular tasks. They determine how one feels, thinks, motivates himself, and behaves. According to Bandura (1995), self-efficacy is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations. An individual's belief in his behavioural competence in a particular situation can be influenced by, among other things, the degree and quality of the emotional arousal an individual experiences when engaging in a particular behaviour in a particular situation (Bandura, 1977). Self-efficacy may play a role in a learner's desire to undertake and/or complete a task because people tend to select tasks and activities in which they feel confident and competent (Pajares, 2002; Pintrich & De Groot, 1990; Schunk & Hanson, 1985).

Studies suggest that social and emotional competency and self-efficacy have an impact on academic achievement (Bandura & Wood, 1989; Zimmerman, 2000) and positive links between self-efficacy and performance have been widely reported in a number of studies (Bandura, 1977, 1986; Brosnan, 1998; Schunk, 1991; Stajkovic & Luthans, 1998).

Efficacy expectations are said to influence initiating behaviours and the degree of persistence in overcoming difficulties encountered when trying to accomplish a task (Bandura, 1997). People who doubt their capabilities shy away from difficult tasks which they view as personal threats. In contrast, people who have a high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided.

According to Bandura (1977), expectations of personal efficacy are derived from four principal sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states.

Performance accomplishments help create a strong sense of efficacy through mastery experiences. Even a few setbacks and difficulties in human pursuits serve a useful purpose in learning that success usually requires sustained effort.

Vicarious experience provided by social models helps create and strengthen one's beliefs in self-efficacy. Seeing people who are similar to ourselves succeed by sustained effort raises our beliefs that we too possess

the capabilities to master the comparable activities required to succeed. Modeling provides a social standard against which to judge our own capabilities.

Verbal persuasion strengthens people's beliefs that they possess the capabilities to master given activities. If people are persuaded verbally that they have what it takes to accomplish a task successfully, they are more likely to expend greater effort to accomplish a task than if they harbour self-doubts and dwell on personal deficiencies when problems arise.

Finally, physiological states influence people's beliefs in their capabilities. One can have physical reactions to anticipated events and can use physiological indicators such as sweaty palms as sources of self-efficacy information. It is reasonable to suggest, then, that a state of high writing anxiety or high computer anxiety can decrease one's belief in one's self-efficacy and impede performance.

Social cognitive theory, with self-efficacy as a major construct, postulates that all of the above-mentioned sources of self-efficacy information are the most influential determinants of performance, and explains how personalization and modeling are used to enhance or impair the

capabilities of human learning (Bandura, 1977). In our study, the L2 learner's motivation for the course could be indicative of his self-efficacy. Any mistakes that the learner makes could represent personal and social evaluative threats to him (Bandura 1989, 1991). Perceived threats pose possible adverse outcomes with learners avoiding any coping strategies. Such individuals who believe that they cannot effectively manage threats are likely to experience high levels of anxiety because they tend to dwell on their personal deficiencies rather than on task accomplishment, which, over time, breeds failure (Bandura 1991). At excessive levels, anxiety interferes with an individual's ability to accurately discriminate among stimuli and is likely to lead to diminished learning (Bandura 1997; Gaudry & Fitzgerald 1971; Scovel 1978).

In light of the Social Cognitive Theory, we decided to measure two different types of anxiety, expecting them to play a significant role in students' academic achievement when it comes to learning and using a second language.

2.4 The Input and Affective Filter Hypotheses

According to Krashen's Second Language Acquisition Theory, which is based on social constructivist principles, there are five key hypotheses that explain how a second language is learned. Two of the five hypotheses that

pertain to this study are the **Input Hypothesis** and the **Affective Filter Hypothesis**.

According to the **Input Hypothesis**, language acquisition takes place during human interaction in a L2 environment when the learner receives language 'input' that is one step beyond his/her current stage of linguistic competence (Krashen, 1982). Krashen's Input Hypothesis suggests that in order for language acquisition to take place, the learner must be given comprehensible input of language structures through written or oral productions that are slightly more difficult than his current ability, but do not exceed his level of competence (Brown, 2000; Krashen, 1982). The learner must go beyond the structure of the language and understand the meaning of the message. Consequently, during the course design phase, we were careful to select teaching and evaluation materials that were just slightly above the learners' ability, but not too difficult for the students, based on their level of competence as established prior to taking the course (see section 4.1 'participants').

The **Affective Filter Hypothesis** states that bored, tense, angry, or anxious learners will screen out input, consequently not allowing for acquisition of the target language. The affective variables that play a role in L2 acquisition, according to Krashen, are motivation and self-confidence, whose levels, when low, can hinder success in L2 acquisition by raising the

affective filter and forming a mental block that prevents the input from getting through. Anxiety, when high, can have a similar effect. Consequently, the learner's state of mind or disposition plays a significant role in terms of how much and what is noticed by the learner given his emotional state. Krashen's "filter", which limits what is noticed and what is acquired, fluctuates up or down depending on whether the learner is stressed or relaxed, motivated or unmotivated, or self-conscious or not (Krashen, 1982, Lightbown & Spada, 1993). In other words, when a learner receives interesting, meaningful and comprehensible input in an environment that is free from stress, he will be in a better position to develop his language competence because he will have lowered his defences and opened himself up for acquisition to occur.

In this study, we aim to understand whether, in fact, there are "filters" that go up when a learner feels anxious, inadequate, or unmotivated, and if so, whether these feelings influence the learner's performance in the hybrid ESL writing course. We will examine the possibility of an affective filter through our measurement of anxiety and motivation: If such measurements show significant negative correlations with language learning evidenced by course performance (or significant positive correlation in the case of motivation), then it will be assumed that affective filters are raised by students' anxiety and/or lack of motivation.

3. State of the question

3.1 Anxiety and Distance Learning

The role of anxiety in Second Language (L2) learning has been the focus of considerable research that soared in the 1970s (e.g., Daly & Miller, 1975, 1979; Scovel, 1978; Sieber, O'Neil, & Tobias, 1977). Over the following decades, researchers have differentiated L2 learning anxiety by skill –speaking (Phillips, 1992), listening (Vogely, 1999), reading, and writing (Cheng, Horwitz, & Schallert, 1999). Despite empirical data suggesting the contrary (e.g., Bailey, 1983; Brown, Robson, & Rosenkjar, 2001; MacIntyre & Gardner, 1994; Tobias, 1986), the majority of published studies on the effect of language anxiety have yielded negative relationships between anxiety and academic performance in foreign language learning (e.g., Aida, 1994; Bailey, 1983; MacIntyre & Gardner, 1991; Phillips, 1992; see Pichette, 2009 for an overview). Stress, in comparison, is a state which prepares an individual for action in his environment. It is accompanied by negative feelings, but its effects on performance can be positive or negative. Too much stress inhibits; not enough stress can have a similar negative effect. (Mandler, 1979).

Only very recently has the study of L2 learning anxiety been expanded to include Distance Learning (DL). In a study conducted on anxiety and non-anxiety in a distance language learning environment, Hurd

(2007) found that nearly two thirds of her participants (64.5%) preferred DL language courses for practical reasons, which included time flexibility and lack of mobility or proximity to the institution. Among the students who participated in the study, 35.3% preferred DL courses because they experienced reduced stress, could work alone or at their own pace, and/or welcomed the challenge of learning on their own. Hurd investigated three stages in which anxiety may be manifest- the input, processing and output stages- and found that, not surprisingly, the output stage produced the highest evidence of anxiety. As identified by other researchers (Horwitz, 2001; MacIntyre, 1999), speaking in front of others could be an important source of language anxiety. Although levels of anxiety were similar for both distance language learners four months into the course, 27% claimed that the distance factor actually made them less anxious.

In a study conducted at the same time but published later, Pichette (2009) looked at second language anxiety and distance language learning and found no significant difference in anxiety profiles between DL and classroom students. Pichette hypothesized that general foreign language anxiety should be present among distance language learners given the output-oriented nature of language courses and the expectation of oral interaction. He also found that there was a change in profiles of DL and classroom students over the last ten years, with DL students' profiles increasingly resembling those of classroom students, suggesting that anxiety

may not be a differentiating factor in student profiles. The profiles of distance learners and classroom learners are merging, making it reasonable to assume that anxiety factors impacting classroom learners will also impact distance learners. Differences in anxiety profiles and expectation of fewer oral interactions are probably not the main reasons anymore for North-American students' choosing DL courses. Pichette identified several factors that could explain lower anxiety levels among his DL participants, such as prior experience with L2 learning. Although, as mentioned by the researcher, an unfamiliar language or writing system could counter-balance the effect of prior experience with the target language, a DL writing course could be appealing to the language learner who feels anxious at the thought of speaking in front of a class. Furthermore, more experienced students as opposed to first-semester students tend to be less anxious, particularly in reading and writing. Pichette concludes that further study is warranted to determine whether more experienced language learners are less anxious than those learning another language for the first time, and whether there is a tendency for writing anxiety to be lower in DL. The current study addresses the second issue.

Finally, in a recent descriptive, non-correlational study conducted with 120 students in North Cyprus, Tuncay and Uzunboylu (2010) identified language anxiety and computer anxiety as reasons for students' resistance to distance learning. Therefore, among the anxiety-related affective variables

shown over the last three decades to impact language learning, two are likely to exhibit different patterns of influence among students in DL and in classroom settings: writing anxiety and computer anxiety. Writing anxiety describes the dysfunctional anxiety that many individuals suffer when confronted with writing tasks. According to studies conducted by Daly and Miller (1975), and Daly (1979), writing anxiety, or apprehension as they call it, is a distinct form of anxiety, unique to written communication. It interferes not only with the development of skills, but with students' personal and professional lives as well. Coupled with other types of anxiety, such as computer anxiety, the learner may experience a disempowerment to carry out even the easiest task. Computer anxiety is a situation-specific anxiety (Heinssen, Glass, & Knight, 1987) much like test anxiety and math anxiety. As its name suggests, it is the type of anxiety learners feel when interacting with computers, or at the prospect of doing so. Given the increased presence of computers in language courses, the role played by this type of anxiety has also been the focus of considerable research in language learning (e.g., Aydin, 2011; Lu, 2005; Matsumura & Hann, 2004; Saade & Kira, 2010).

Research shows a negative relationship between various types of anxiety and academic performance (e.g., Bailey, Onwuegbuzie, & Daley, 2000; Chen & Chang, 2004; MacIntyre & Gardner, 1991; Phillips, 1992). Anxiety also has a negative correlation with motivation toward learning (Gardner,

Day, & MacIntyre, 1992), and motivation is an essential variable in a learning situation. Motivation, self-confidence, and anxiety, when low, can hinder success in L2 acquisition by raising a hypothetical affective filter (Krashen, 1985) or forming a mental block that prevents the input from getting through or becoming assimilated. Learners who experience L2 writing anxiety will most likely avoid situations that require them to write in the second language. Such individuals may opt for the classroom course environment in response to their feelings of anxiety. On the contrary, L2 learners who may be particularly anxious about oral interaction in the target language may opt to take distance courses because DL presupposes interaction primarily in the written form. Therefore, it can be speculated that, on the one hand, distance L2 learners know that written communication is required in distance courses and opt for such courses because they are less anxious about writing than they are about speaking, and those learners who are more anxious about writing avoid DL courses.

3.2 Motivation and Distance Learning

The impact of motivation on second language acquisition has been studied for a long time and several seminal works by the most prominent figures in the field (e.g. Deci & Ryan, 1985; Dörnyei, 1998; MacIntyre & Gardner, 1991; MacIntyre, 2002) generally show strong positive impact of motivation on achievement in learning a second language.

According to Gardner (1996), when an individual has the opportunity to learn a second/foreign language, his motivation, in addition to other affective variables such as attitudes, anxiety, self-confidence, ability (including language aptitude), intelligence, independence, and individual actions (i.e. application of learning strategies), will impact how much and how quickly the individual will learn. It has further been shown that anxiety has a negative correlation with motivation toward the learning situation (Gardner, Day, & MacIntyre, 1992). Csikszentmihalyi's notion of flow takes into account motivation and defines *flow* as the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it (Csikszentmihalyi & Nakamura, 2002). Consequently, motivation is decreased if one's flow is decreased. Self-efficacy, one's perception of how capable one is to perform a task, can also be a factor in one's motivation.

There are two kinds of motivation: *intrinsic* and *extrinsic*. *Intrinsic* motivation refers to the individual's desire to perform the task for its own sake (Bénadou & Tirole, 2003; Boyatzis, 2002; Brockett, 2006; Goleman, 1998; Scott, 2006). For example, the individual wants to achieve success, or to avoid failure. *Extrinsic* motivation is contingent upon rewards

(Bénadou & Tirole, 2003). Here, motivation may involve the learning environment, getting good grades, pleasing the teacher, working toward a career goal. In a study conducted by Delialioglu (2005), results indicated that *intrinsic* motivation and internally rewarded learning is the key element of web-based instruction and hybrid courses. Interviews with students revealed that with *extrinsic* motivation, students were more prone to losing their motivation for the learning situation or task.

Research on motivation and the distance learning environment suggests that motivation is probably the most important factor in a learner's selection of this form of learning (Carrell & Menzel, 2001; Dörnyei, 2001). Since the learner takes on the main responsibility for his learning, he must be able to work independently and, often, with minimal interaction with a teacher or other learners. Frustration can set in if, for example, the learner has questions and cannot get immediate answers. Coping with the learner interface, the online course material, or lack of feedback can be overwhelming for a learner. Consequently, the learner's self-determination and motivation for the course are essential factors in determining retention and achievement (Dornyei, 2001). Allen, Mabry, Mattrey, Bourhis, Titsworth, and Burrell (2004) found that DL students may be more motivated to achieve because of the extra effort that is perceived to be required in DL courses since students have to learn to use the technology as well. According to research conducted by Sankaran, Siva and Bui (2001), motivation is higher in web-based courses because student commitment to the course is higher, and this is so because

students in distance learning settings usually have to undergo many sacrifices to get an education. Consequently, their motivation is higher and is the driving force which influences their performance.

In most research summarized above, motivation is seen as a personality trait –as intrinsic motivation, related to a person's confidence in their own means and capacities. However, in this study, motivation is considered not as a general personality trait such as our learners' general tendency to get intrinsically motivated (e.g., Deci & Ryan, 1985), but simply as our learners' enthusiasm toward the specific course they are taking and in the context of which this study takes place.

3.3 Conclusion

When low, motivation and self-confidence can hinder success in L2 acquisition by raising a hypothetical affective filter (Krashen, 1985) or forming a mental block that prevents the input from getting through or becoming assimilated. Anxiety when high has a similar effect. Learners who experience L2 writing anxiety will most likely avoid situations that require them to write in the second language. Such individuals may opt for the classroom course environment in response to their feelings of anxiety. Those L2 learners who may be particularly anxious about oral interaction in the target language may opt to take distance courses because DL presupposes interaction

primarily in the written form. Therefore, it can be speculated that, on the one hand, distance L2 learners know that written communication is required in distance courses, and opt for such courses because they are less anxious about writing than they are about speaking, and those learners who are more anxious about writing avoid DL courses.

3.4 Research hypotheses

This study examines whether relationships exist between ESL performance and these two variables –writing anxiety and computer anxiety-, and whether these anxiety variables show different correlations in classroom and DL environments. Based on the above considerations stemming from earlier research, four research hypotheses are formulated. First, as suggested by most research summarized above, the variables of writing anxiety and computer anxiety should be related significantly to performance in both environments. Second, as suggested by data from Pichette (2009), it is expected that writing anxiety should be lower in a DL environment than in a classroom environment. Third, there should be no difference in computer anxiety in the DL and classroom environments. Finally, motivation should be higher for people who opted for the hybrid version of the course.

4. Method

Prior to the commencement of the study, ethics approval was sought and obtained by both Télé-université and McGill University (Appendix D).

4.1 Participants

The study took place in the department of English and French at McGill, an English-speaking Canadian university. Learners registered in a writing course of the Advanced 1 level were told of the study that was to be conducted and asked for their voluntary participation on the first day of class. One instructor was assigned to speak to the learners in each of the targeted writing classes so as to ensure that all learners had the same explanations by the same person. The experiment was conducted during the Fall of 2009. A total of 45 learners enrolled in hybrid/blended learning and classroom courses took part. The participants were adult learners of English as a second language, 12 of whom had French as their first language, 33 of whom were native speakers of other languages which included Spanish, Arabic, Mandarin, Romanian, Albanian, Ukrainian, Vietnamese and Hindi, and 28 of them reported speaking a third language, in most cases Spanish or Arabic. Their level of proficiency in English, as measured by the University's Entrance Placement Test, was low advanced, which corresponds approximately to the B2 level on the Common European Framework of Reference of Languages. Since this was the only course that lent itself to this study, having both a classroom and a hybrid version, all the

students were at the low advanced level by default. Not all participants had applied for admission to the certificate program. Approximately two thirds were considered special students, taking courses for reasons other than for obtaining the Certificate of Proficiency- English for Professional Communication. Consequently, learners were at different stages in the program ranging from first semester to last semester. Their mean age was 33 years, with a range of 22 to 57 years.

4.2 Course formats

Students enrolled in two sections of the advanced-level hybrid/blended learning course and two sections of the classroom course called *Grammar and Writing Techniques*, voluntarily participated in this study. The course focused on a review of advanced grammatical structures, and on writing for the workplace, understanding and using appropriate grammar in context, form, content, tone, and specialized vocabulary for workplace correspondence, including e-mails, memos, and letters for specific purposes. This course was chosen to pilot the hybrid format of course delivery for a number of reasons. First, it is an advanced-level course, which presupposes that students have no trouble understanding and following instructions in English, especially since there is no instructor present during the hybrid sessions to provide immediate clarification and feedback. Second, it was easier to create a DL grammar and writing course because emphasis was placed on the written rather than the spoken word,

and most of the activities were written in nature. Third, the mode of delivery did not require sophisticated software and equipment on the part of both the University and the students, and there was no need for students to acquire any additional software or hardware to take part in this course. Most activities were created using Word documents or PowerPoint presentations. Finally, assignments could be submitted by students in simple text form as email attachments, as opposed to audio and/or video files, had this course been an oral communication course.

The hybrid version consisted of eight meetings in a classroom and five online sessions. Each meeting or session totalled 3 hours of language learning. Therefore, 60% of the course was spent in class and 40% was spent online. The online sessions consisted of participating in a collaborative "Virtual Project", a simulation in which learners co-created a fictitious organization or company and then applied for a municipal grant. Learners were paired up and asked to make their own arrangements as to how they would communicate with each other online throughout the course. Since the objective was persuasive writing, and there would be a lot of back and forth correspondence, most chose to email each other. Where there was misunderstanding or need of clarity, learners were encouraged to telephone or email each other for clarification. In class, the same subject matter was taught using the same "Virtual Project" but with face to face contact and letter-writing instead of email-writing. The grammar that was taught in both

types of courses was exactly the same. The course covered, among other things, subject-verb agreement, pronoun antecedents, misplaced and dangling modifiers, parallel structure, comma splices, fused sentences and fragments, and included a review of articles, prepositions, gerunds and infinitives.

4.3 Materials

Profile questionnaires

The participants first completed a profile questionnaire of 11 items that allowed us to gather socio-demographic information, such as age, gender, etc., as well as information about their profile and experience as students. This instrument can be found in Appendix A.

Measuring foreign language writing anxiety

The Daly-Miller Writing Apprehension Test (WAT) (Daly & Miller, 1975) was used for measuring foreign language writing anxiety. As stated by Wiltse (2000), this test presents higher validity than comparable instruments measuring writing anxiety and yields a superior Cronbach alpha coefficient of .95. This 26-item test has been widely used to measure feelings and attitudes students may have toward and during the writing task. As other researchers have done in the past (e.g., Cheng, Horwitz, &

Schallert, 1999; Pichette, 2009), the scale was adapted in this study to reflect students' writing in English only.

Measuring computer anxiety

Computer anxiety was assessed using the Computer Anxiety Rating Scale (CARS) developed and validated by Heinssen, Glass, and Knight (1987). CARS is a 20-item, five-point Likert scale ranging from strongly disagree to strongly agree, and designed to assess a person's level of computer anxiety. According to the three researchers, computer anxiety involves an affective response to computers that results in a resistance to or an avoidance of using computers because of fear, apprehension, intimidation, hostility, worry, and embarrassment.

Measuring Motivation for the Learning Environment

Although numerous scales exist for assessing motivation, none could be found that would measure our participants' motivation for taking either the classroom or the hybrid/online version of the course. Given the nature of the hybrid course version, it was assumed that students' motivation was related to both writing activities and online aspects of the course. Therefore, a six-item Likert scale was developed for the purpose of measuring students' motivation for that choice of learning environment. Since this was not an

already existing instrument, it is provided in Appendix B.

Measuring performance

Performance on the course was assessed by means of active participation in class or online activities, progress tests administered every three to four weeks, weekly assignments and a final exam on the last day of class. The means of evaluation were already in place for this course before it became offered in a hybrid version. Progress tests were designed to evaluate students' improvement in using grammar and new vocabulary, spotting and correcting their own errors, and combining ideas into coherent paragraphs and essays with a high degree of linguistic precision. Assignments consisted of graded essays and business correspondence. The final exam was comprised of two parts: A 300-350 word written production whose purpose was to persuade, compare/contrast, or state a cause or effect. This allowed for the evaluation of the student's ability to write a complex letter of a professional nature. The second part was a business letter that had to be written in response to a scenario. Each part of the final exam had equal weighting. Both classroom and hybrid courses had exactly the same assignments, tests and final exam. Performance for each student was in the form of a final grade in percentage points. The same person graded all assignments for both course environments. The grading scheme was the same as for previous versions of the course, attributing 60% of the grade to

the Virtual Project, assignments, progress tests and participation, and 40% to the final exam.

Procedure

All the data were gathered in a similar manner. The Student Profile Questionnaires, the WAT, and the CARS were administered in class on the second week of classes. These questionnaires took approximately 45 minutes to complete, and participating students were given class time to complete the questionnaires while their non-participating classmates worked on an individualized assignment.

At the end of the semester, all participants were asked to complete a standard 16-item, online course evaluation questionnaire and a 10-item hybrid course format questionnaire (if they had enrolled in the hybrid course) in one of the university's computer labs or at home. These questionnaires took between 20 and 30 minutes to complete. These questionnaires can be found in Appendix C.

4. Results

Before addressing our three research hypotheses, Table 1 presents descriptive statistics of the data obtained for the four variables considered in our study. All means are in the form of percentages, followed by the standard deviation in parenthesis for each mean.

Table 1: Descriptive statistics for all four variables: Means (%) and standard deviation.

	Writing Anxiety	Computer Anxiety	Motivation	Performance
Regular	62.56 (4.96)	59.95 (4.60)	60.64 (7.30)	71.38 (10.27)
Hybrid	62.71 (4.85)	61.33 (8.93)	62.81 (9.18)	77.74 (7.79)

Hypothesis #1: *Writing anxiety and computer anxiety should be related significantly to performance in both environments*

A Pearson's correlation matrix was run on the two anxiety variables and performance, for each learning environment separately.

As evidenced in Table 2 below, for the 24 students taking the regular grammar course taught in a regular classroom environment, the only significant correlation obtained is between computer anxiety and performance (r = .45, p = 0.014). Language anxiety did not yield a significant correlation with performance. The 19 students who opted for the hybrid version of the grammar course show a different pattern, where the only significant correlation is between the two types of anxiety but with a *p* value near to non-significance (r = .42, p =. 04).

Table 2: Correlations between all three variables

Classroom environment (N = 24)				Hybrid version (N = 19)			
	Writing	Computer	Performance		Writing	Computer	Performance
Writing	1			Writing	1		
Computer	0.19	1		Computer	0.42*	1	
Performance	0.03	0.45*	1	Performance	-0.01	-0.30	1

** p<.05; ** p<.01; *** p<.001*

Since we are in the presence of two types of anxiety, it is legitimate to assume that there may be some overlap in their impact on performance,

i.e. that to a certain extent they involve common processes or factors. In such situations, it is necessary to separate out their effect by including them in the same formula. Regression analyses were also performed with performance as the dependent variable and writing anxiety and computer anxiety as the independent variables. As evidenced in the analysis output, the F values obtained were low and no data were significant except for the previously identified relation between computer anxiety and performance for the students who took the classroom version of the course (t = 2.30, p = .032). For students who took the hybrid version of the course, when combining both affective variables in the same regression also confirms the correlations we had obtained, with neither type of anxiety emerging as a significant predictor of performance. See Table 3 below for the detailed regression.

Table 3: Linear regressions for both environments: Performance as a function of writing anxiety and computer anxiety

Classroom environment

	Sum of sq.	*Mean sq.*	*Crit. val F.*	
Regression	160.06	80.03	0.855	
Residual	11670.60	507.42		
Total	11830.65			
			Inf. lim.;	*Sup. Lim.:*
	Err. type	*t*	*p = 95%*	*p = 95%*
Constant	75.813	1.345	-54.893	258.770
Writing anxiety	0.921	-0.070	-1.970	1.841
Computer anxiety	0.993	-0.538	0.596	1.520

Hybrid environment

	Sum of sq.	*Mean sq.*	*Crit. val F.*
Regression	119.87	59.94	0.394
Residual	971.81	60.74	
Total	1091.68		

	Err. type	*t*	*Inf. lim.; p = 95%*	*Sup. Lim.: p = 95%*
Constant	24.002	3.426	31.349	133.114
Writing anxiety	0.418	0.574	-0.646	1.126
Computer anxiety	0.227	-1.405	-0.800	0.162

Hypothesis #2: *Writing anxiety should be lower in a DL environment than in a classroom environment*

Hypothesis #3: *There should be no difference in computer anxiety in the DL and classroom environments*

The nature of these two hypotheses allowed us to address both of them based on the same analysis.

To investigate the presence of a significant difference between means on our various scales for our two environments, unpaired Student t-tests are more appropriate than Z tests, given the limited number of participants. t-tests were performed on the means presented in Table 1 with an alpha level

set at .05, as is conventional in human and social sciences. The tests show no significant difference for either writing anxiety (t (43) = .10, p =.92) or computer anxiety (t (43) = .68, p =.50). Although these figures for computer anxiety support Hypothesis #3, those for writing anxiety do not support Hypothesis #2.

In terms of anxiety and motivation, it can be deduced that in-class learners who register for hybrid courses are not different from their "hybrid" classmates. It would be interesting to see whether this holds true for those who might take this course completely through distance learning. A 100% distance learning course would have to be created that was identical in its pedagogical plan as the in-class and hybrid course. Similarly, such a course that is completely online but that is identical to the other two courses could show whether the medium makes a significant difference if the pedagogy is the same.

Hypothesis #4: *Motivation should be higher for people who opted for the hybrid version of the course*

As evidenced in Table 1, the mean score on the motivation scale was 60.64 (s.d. 7.30) for the 24 students who took the traditional classroom version, and 62.81 (s.d. 9.18) for the 19 students who took the hybrid version. A t-test show no significant difference between the two Means (t (41) = 0.88, p = 0.38). Also, the low number of items coupled to the limited

number of participants does not make data collected from this instrument appropriate for the kind of statistical analysis that was applied to data collected by other instruments.

5. Discussion

Since there is little research that compared the impact of anxiety in a classroom versus a web-based environment, this study aimed to reach a better understanding of the subject, with the hope of identifying practices in distance learning that could be put in place to help students better deal with affective issues.

While we expected, through our first research hypothesis, that both affective variables under consideration would show correlations with language learning outcomes as reflected by course performance, only computer anxiety showed a significant correlation, and only in the case of learners who opted for the traditional classroom setting. This correlation is most likely a statistical artefact due to the limited number of participants, since there is no obvious reason why that type of anxiety would exclusively impact the performance of the participants whose learning environment shows limited use of computers. In addition, a positive correlation such as the one we obtained means that higher anxiety leads to better performance. This observation serves as additional empirical data suggesting the positive effects of certain amounts of anxiety, as was discovered in studies mentioned in the introduction of this article. Large-scale research is warranted to investigate the amount of anxiety that has either negative or positive effects

on learning, and to examine anxiety- and learner-related variables that determine the nature of the effect observed.

In relation to the observation made in the previous paragraph, we must consider that, although compounding data is fundamental to quantitative research, it can hide interesting dynamics at work. A theoretical issue here is the possibility that the presence of people who are helped by anxiety can counterbalance the presence of others who are handicapped by anxiety, leading to an absence of a significant correlation. Finding a research design to address this intricate question will be a challenge for future research.

The fact that writing anxiety does not impact performance despite the notable presence of writing in that grammar course suggests that this type of anxiety plays a lesser role on language learning outcomes, when compared to the more prevalent and oft-cited oral anxiety. A large number of participants is probably needed for writing anxiety to show a non-negligible impact on language learning, but even such possibility is purely hypothetical, since this impact can be either positive or negative depending on the amount and the nature of such anxiety. Consequently, our correlational data for writing anxiety and computer anxiety suggest that such types of anxiety should not worry language teachers needlessly. Computer anxiety is probably still an issue among older learners who may be less familiar with computer technologies or in countries and places where the presence of such

technology may be more recent and less widespread, thus explaining results such as those obtained by Tuncay and Uzunboylu (2010).

Regarding the second and third research hypotheses, the absence of differences between students in both learning environments with regards to affective variables confirms the observation made by Pichette (2009) as to the merging of socio-demographic profiles between classroom and distance learners. An increasing number of students now combine both types of environments in their curriculum and such choices are based mainly on considerations other than of an affective nature. Such data suggest that comparisons of profiles between classroom and DL learners may not be an issue worth investigating anymore in language studies, at least in developed countries, since that would be assuming a difference between groups of learners that does not exist any longer.

The fourth hypothesis, concerning motivation, was not supported either, since there was no significant difference in motivation scores between the two groups. What remains puzzling is that the students who took the hybrid version of the course significantly outperformed their peers who took the classroom version ($t(41) = 2.24$, $p = 0.03$), despite the fact that they showed statistically equal anxiety and motivation. Several explanations come to mind: the possibility that the students who took the hybrid version were actually more motivated than their counterparts, but that the motivation

scale was not detailed enough to highlight those differences. Also, despite the assumed equal competence across groups –all being low advanced- it is possible that the students who took the hybrid version were stronger students, not in English but in general, as general learning ability was not measured or addressed (it is often the keen students who volunteer for such experiments). Language aptitude has long been considered a strong predictor of language learning outcomes (Sparks, Patton, Ganschow, Humbach, & Javorsky, 2006). Such studies in the future could include this variable using one of the major language aptitude standardized tests, such as the Modern Language Aptitude Test (Carroll & Sapon, 2002) or the Test of Cognitive Ability for Novelty in the Acquisition of Language (Grigorenko, Sternberg, & Ehrman, 2000).

The absence of significant correlations in our study was important in confirming previous hypotheses, and it bears implications for future studies on affective factors in language learning, namely stressing the need here for future studies on the issues surrounding the positive or negative effects of anxiety on learning, while suggesting the irrelevance of future studies that assume differences between classroom and distance learners in developed countries. This study also highlights the importance of disseminating and publishing studies even when they do not yield significant correlations, or when they do not support the research hypotheses and/or do not contradict earlier findings, since decisions not to publish such studies prevent the

scientific community from getting a complete picture of certain issues and result in a serious shortcoming for meta-analyses (see Egger & Smith, 1998; Talbot, 2011).

References

Aida, Y. (1994). Examination of Horwitz, Horwitz and Cope's construct of foreign language anxiety: The case of students of Japanese. *The Modern Language Journal,* 78, 155–168.

Allen, M., Mabry, E., Mattrey, M., Bourhis, J., Titsworth, S., Burrell, N. (2004). Evaluating the Effectiveness of Distance Learning: A Comparison Using Meta-Analysis. *Journal of Communication, 54* (3), 402-420.

Anderson, R. C. (1984). Role of the reader's schema in comprehension, learning, and memory. In R. Anderson, J. Osborn, & R. Tierney (Eds.), *Learning to read in American schools: Basal readers and content texts* (pp. 243-257). Hillsdale, NJ: Erlbaum.

Anderson, R. C. (1977). The notion of schemata and the educational enterprise: General discussion of conference. In R.C. Anderson, R.J Spiro, and W.E. Montague (Eds.), *Schooling and the acquisition of knowledge* (pp. 415-431, Hillsdale, NJ: Erlbaum.

Aydin, S. (2011). Internet anxiety among foreign language learners. *TechTrends, 55*(2), 46-54.

Bailey, K. M. (1983). Competitiveness and anxiety in adult second language learning: Looking at and through the diary studies. In H. W Seliger & M. H. Long. *Classroom Oriented Research in Second Language Acquisition* (pp. 67–102). Rowley, MA: Newbury House.

Bailey, P., Onwuegbuzie , A. J., & Daley, C. E. (2000). Correlates of anxiety at three stages of the foreign language learning process. *Journal of Language and Social Psychology*, 19(4), 474-490.

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: W.H. Freeman.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

Bandura, A., & Wood, R. (1989). Effects of perceived controllability and performance standards on self-regulation of complex decision making. *Journal of Personality and Social Psychology, 56,* 805-814.

Bartlett, F.C. (1932). *Remembering: An Experimental and Social Study*. Cambridge: Cambridge University Press.

Bénadou, R. & Tirole, J. (2003). Intrinsic and Extrinsic Motivation. *Review of Economic Studies*, V:70, 489-520.

Boyatzis, R.E. (2002). Unleashing the power of self-directed learning. In R. Sims (ed.), *Changing the Way We Manage Change: The Consultants Speak*. NY: Quorum Books.

Brockett, R.G. (2006). Self-directed learning and the paradox of choice. *International Journal of Self-Directed Learning, 3(*2), 27-33.

Brosnan, M. J. (1998). The impact of computer anxiety and self-efficacy upon performance. *Journal of Computer Assisted Learning*, 14, 223–234.

Brown, J. D., Robson, G., & Rosenkjar, P. R. (2001). Personality, motivation, anxiety, strategies and language proficiency of Japanese students. *Motivation and Second Language Acquisition, 23*, 361–398.

Carrell, L. J. & Menzel, E. K. (2001). Variations in learning, motivation, and perceived immediacy between live and distance education classrooms. *Communication Education, 50*(3), 230-240.

Carroll, J. B., & Sapon, S. (2002). *Modern Language Aptitude Test: Manual 2002 Edition*. Bethesda, MD: Second Language Testing, Inc.

Chen, T.-Y., & Chang, G. B. Y. (2004). The relationship between foreign language anxiety and learning difficulties. *Foreign Language Annals, 37*, 279–290.

Cheng, Y., Horwitz, E., & Schallert, D. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning, 49*(3), 417-446.

Chua, A. (2002). The influence of social interaction on knowledge creation. *Journal of Intellectual Capital, 3*(4), 375-392.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, 95-120.

Csikszentmihalyi, M. & Nakamura, J. (2002*). The Concept of Flow*. London: Oxford University Press

Daisey, P. L. (2009). *The Benefit of Authoring "How-to" Books to Reduce the Writing Apprehension of Secondary Preservice Teachers.* Paper presented at

the American Educational Research Association Conference. Chicago, IL, June..

Daly, J. A. (1979). Writing apprehension in the classroom: Teacher role expectancies of the apprehensive writer. *Research in the Teaching of English, 13*, 37-45.

Daly, J. A., & Miller, M. D. (1975). Further studies in writing apprehension: SAT scores, success, expectations, willingness to take advanced courses, and sex differences. *Research in the Teaching of English, 9*, 250-56.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Dörnyei, Z. (1998). Motivation in second and foreign language learning. Language Teaching, 31, 117-135 doi:10.1017/S026144480001315X

Dörnyei, Z. (2001). *Teaching and researching motivation*. Harlow: Longman Pearson Education Ltd.

Dracopoulos, E. & Pichette, F. (2011). *Second Language Writing Anxiety, Computer Anxiety, and Performance in a Classroom in a Web-based versus a Classroom Environment.* Studies in Second Language Learning and Teaching, (SSLT) 1 (1). 101-117.

Ganschow, L., & Sparks, R. (1996). Anxiety about foreign language learning among high school women. *The Modern Language Journal, 80*(2), 199-212.

Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.

Gardner, R. C., Day, B., & MacIntyre, P. D. (1992). Integrative motivation, induced anxiety,and language learning in a controlled environment. Studies in Second Language Acquisition, 14, 197-214.

Gaudry, E., & Fitzgerald, D. (1971). Test anxiety, intelligence, and academic achievement. In Gaudry and Spielberger (Eds.), *Anxiety and Educational Achievement* (pp. 155-162). Sydney: John Wiley and Sons.

Given, B. K. (2002) *Teaching to the Brain's Natural Learning Systems.* Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).

Goleman D, (1998). *Working with Emotional. Intelligence*, London: Bloomsbury Publishing.

Grigorenko, E. L.; Sternberg, R. J.; Ehrman, M. E. (2000). A Theory-Based Approach to the Measurement of Foreign Language Learning Ability: The Canal-F Theory and Test. The *Modern Language Journal, 84*(3): 390-405.

Heinssen, R. K., Glass, C. R., & Knight, L. A. (1987). Assessing computer anxiety: Development and validation of the Computer Anxiety Rating Scale. *Computers in Human Behavior, 3*(1), 49-59.

Horwitz, E. K. (1986). Preliminary evidence for the reliability and validity of a foreign language anxiety scale. *TESOL Quarterly, 20*, 559-562.

Horwitz, E. K. (2000). It ain't over 'till it's over: On foreign language anxiety, first language deficits, and the confounding of variables. *The Modern Language Journal, 8*(2), 256-259.

Horwitz, E. K. (2001). Language anxiety and achievement, *Annual Review of Applied Linguistics*, 21, 112–126.

Horwitz, E. K., Horwitz, M. & Cope, J. A. (1986). Foreign language classroom anxiety. *The Modern Language Journal, 70*, 125-132.

Hurd, S. (2007). Anxiety and non-anxiety in a distance language learning environment: The distance factor as a modifying influence. *System, 35*(4), 487-508.

Jonassen, D. H., & Grabowski, B. L. (1993). *Handbook of individual differences, learning, and instruction.* Hillsdale, NJ: Erlbaum.

Kleinmann, H. (1977). Avoidance behaviour in adult second language acquisition, *Language Learning, 27*, 93-107.

Kramer, R. M, Brewer, M. B., & Hanna, B. A. (1996). Collection trust and collective action: the decision to trust as a social decision, in Kramer, R.M, and Tyler T. R. (Eds), *Trust in Organizations, Frontiers of Theory and Research*. Thousand Oaks, CA: Sage.

Krashen, S. D. (1982). *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon.

Krashen, S. D. (1985). Applications of psycholinguistic research to the classroom. In C. James (Ed.), *Practical applications of research in foreign language teaching* (pp.51-66). Lincolnwood, IL: National Textbook Co.

Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. New York: Longman.

Krashen, S. D. (1987). *Principles and Practice in Second Language Acquisition*. New York:Prentice-Hall.

Krashen, S. D. (1988). *Second Language Acquisition and Second Language Learning*. Prentice-Hall International.

Lane, R., Reiman, E. M., Ahern, G. L., Schwartz, G.E., & Davidson, R. J. (1997). Neuroanatomical correlates of happiness, sadness and disgust. *American Journal of Psychiatry, 154*, 926-933.

Lantolf, J. P., & Thorne, S. L. (2006). Sociocultural Theory and the Genesis of Second Language Development. New York: Oxford University Press.

Leonard-Barton, D. (1995). *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*. Harvard Business School Press Boston, MA

Lewis, M. P. (ed.), (2009). Ethnologue: Languages of the World, Sixteenth edition. Dallas, Tex.: SIL International. Online version: http://www.ethnologue.com/.

Lightbown, P., & Spada, N. (1993). *How Languages are Learned*. Oxford: Oxford University Press.

Lu, S.-H. (2010). *A correlational study of computer anxiety, second language writing apprehension and Taiwanese college student experiences with word processing*. Unpublished Doctoral Dissertation, University of Mississippi.

MacIntyre, P. D. (1995). How does anxiety affect second language learning? A reply to Sparks and Ganschow. *The Modern Language Journal*, *79*(1), 90-99.

MacIntyre, P. D. (1999). Language anxiety: A review of the research for language teachers. In D. Young (Ed.), *Affect in Foreign Language and Second Language Learning: A Practical Guide to Creating a Low-anxiety Classroom Atmosphere*, *24–45*. Boston: McGraw-Hill.

MacIntyre, P. D. (2002). Motivation, anxiety and emotion in second language acquisition. In P. Robinson (Ed), *Individual differences in second language acquisition* (pp. 45-68). Amsterdam: Benjamin.

MacIntyre, P. D. & Gardner, R. C. (1989). Anxiety and second language learning: Towards a theoretical clarification. *Language Learning, 39*, 251-275.

MacIntyre, P. D., & Gardner, R. C. (1991). Language anxiety: Its relation to other anxieties and to processing in native and second languages. *Language Learning, 41*, 513–534.

MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning, 44*, 283–305.

MacIntyre, P. D., & Gardner, R. C. (1989). *Anxiety and second language learning: Towards a theoretical clarification*. Language Learning, 39, 251-275.

MacIntyre, P. D., Noels, K. A., & Clement, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning, 47*(2), 256-287.

Mandler, G. (1979). Thought processes, consciousness, and stress. (pp. 179–201) In V. Hamilton & D. M. Warburton (Eds.) *Human stress and cognition: An information processing approach*. New York: John Wiley & Sons.

Matsumura, S., & Hann, G. (2004). Computer anxiety and students' preferred feedback methods in EFL writing. *The Modern Language Journal, 88*, 403-415.

Moore, S.C., & Oaksford, M. (2002). Some long-term effects of emotion on cognition. *British Journal of Psychology, 93*: 383–395.

Nahapiet, J., & Goshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review, 23*(2), 242-246.

Norton, B. & Toohey, K. (eds). (2004). *Critical Pedagogies and Language Learning*. New-York: Cambridge University Press,

Onwuegbuzie, A. J., Bailey, P., & Daley, C. E. (2000). Cognitive, affective, personality, and demographic predictors of foreign-language achievement. *Journal of Educational Research, 94*(1), 3-16.

Pajares (2002). Overview of social cognitive theory and of self-efficacy. Retrieved from http://www.emory.edu/EDUCATION/mfp/eff.html

Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: a review of the literature. *Reading & Writing Quarterly*, 19: 139-158.

Pajares, F. & Valiante, G. (1996). *Predictive utility and causal influence of the writing self-efficacy beliefs of elementary students.* Paper presented at the Annual Meeting of the American Educational Association, New York, NY.

Piaget, J. (1973). *To Understand is to Invent*. New York: Grossman.

Phillips, E. M. (1992). The effects of language anxiety on students' oral test performance and attitudes. *The Modern Language Journal, 76*(1), 14-26.

Pichette, F. (2006). *Classroom vs. distance learning: Comparing anxiety profiles of language learners*. Paper presented at the joint AAAL/CAAL Conference, Montreal, June.

Pichette, F. (2009). Second language anxiety and distance language learning. *Foreign Language Annals, 42*, 77–93.

Pintrich P. R., & De Groot, E. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology 82*, 33–40.

Pintrich P. R. & Schunk, D. H. (2002). *Motivation in education: Theory, research, and applications* (2nd ed.). Columbus, OH: Merrill-Prentice Hall.

Posner, G. J, Strike, K. A., Hewson, P.W., & Gertzog, W.A. (1982). Accommodation of a scientific conception: Towards a theory of conceptual change. *Science Education, 66*(2), 211-227.

Price, M. L. (1988). *Anxiety and the foreign language learner: Correlates of foreign language anxiety*. Unpublished doctoral dissertation, The University of Texas at Austin.

Saade, R. G., & Kira, D. (2009). Computer anxiety in e-learning: The effect of computer self-efficacy. *Journal of Information Technology Education, 8*,

Sankaran, Siva R., & Bui, T. (2001). Impact of Learning Strategies and Motivation on Performance: A Study in Web-Based Instruction. *Journal of Instructional Psychology*, 28 (3) 191-198.

Sieber, J. E., O'Neil, H.F., & Tobias, S. (1977). *Anxiety, Learning, and Instruction.* Hillsdale, NJ: Erlbaum.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist, 26*, 207-231.

Schunk, D. H., & Hanson, A. R. (1985). Peer models: Influence on children's self-efficacy and achievement. *Journal of Educational Psychology, 77,* 313-322.

Scott, K.W. (2006). Self-directed learners' concept of self as learner: Congruous autonomy. *International Journal of Self-Directed Learning, 3*(2), 1-13.

Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. *Language Learning, 28*, 129–142.

Scovel, T. (1978), The Effect of Affect on Foreign Language Learning: A Review of the Anxiety Research. *Language Learning, 28*, 129–142.

Sieber, J. E., O'Neil, H.F., & Tobias, S. (1977). *Anxiety, Learning, and Instruction.* Hillsdale, NJ: Erlbaum.

Sparks, R. L., Patton, J., Ganschow, L., Humbach, N., & Javorsky, J. (2006). Native language predictors of foreign language proficiency and foreign language aptitude. *Annals of Dyslexia, 56*(1), 129-160.

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performances: A meta-analysis. *Psychological Bulletin, 124*, 240-261.

Sternberg R. J. (1999). Successful intelligence: finding a balance. *Trends in Cognitive Sciences, 3* (11), 436–442.

Talbot, N. (2011). *Méta-analyse : un outil pertinent dans le cadre d'une recension des écrits*. Paper presented at the 79th ACFAS conference, Sherbrooke, Canada, May.

Tobias, S. (1986) Anxiety and cognitive processing of instruction. In R. Schuwarzer (Ed.), *Self-related Cognition in Anxiety and Motivation* (pp. 35-43). Hillsdale, NJ: Erlbaum.

Tuncay, N., & Uzunboylu, H. (2010). Anxiety and resistance in distance learning. *Cypriot Journal of Educational Sciences, 4*, 142-150.

Vogely, A. J. (1998). Listening comprehension anxiety: Students' reported sources and solutions. *Foreign Language Annals, 31*, 67–80.

Von Glasersfeld, E. (1995). A constructivist approach to teaching. In L. Steffe & J. Gale (Eds.), *Constructivism in education* (pp. 3-16). New Jersey: Erlbaum.

Von Krogh, G. (1998). Care in knowledge creation. *California Management Review, 40*(3), 133-153.

Vrasidas, C., & McIsaac, M.S. (1999). Factors influencing interaction in an online course. *The American Journal of Distance Education, 13*(3), 22-36.

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Boston, MA: Harvard University Press.

Vygotsky, L. S. (1981). *The development of higher mental functions.* In Wertsch, JV (ed.) *The concept of activity in Soviet Psychology*, (pp. 144-188). New York: Sharpe.

Wiltse, E. M. (2000). *The effects of motivation and anxiety on college students' use of instructor comments*. Unpublished doctoral dissertation, The University of Wyoming, Laramie.

Wittrock, M. C. (1974). *Learning as a generative process. Educational Psychologist, 11*(2), 87-95.

Wittrock, M. C. (1977a). "Learning as a generative process," in M. C. Wittrock, (ed.),. Learning and Instruction. Berkeley, Calif.: McCutchan, 621-631.

Wittrock, M. C. (1977b) *The Human Brain.* Prentice-Hall Inc. Englewood Cliffs, New Jersey, 153-184.

Wittrock, M. C. (1985). Teaching learners generative strategies for enhancing reading comprehension. *Theory into practice, 24*(5), 123-126.

Wittrock, M.C. (1989). Generative Processes of Comprehension. Educational Psychologist, 24(4), 345-376.

Wittrock, M. C. (1991). *Generative teaching of comprehension.* Elementary School Journal, 92 (2), 169-180.

Wittrock, M. C. (1992). Generative learning processes of the brain. *Educational Psychologist, 27*(4), 531-41.

Wittrock, M. C., & Alesandrini, K. (1990). Generation of summaries and analogies and analytic and holistic abilities. *American Educational Research Journal*, *27*, 489-502

APPENDIX A: Student Profile Questionnaires

1. Student's Name (or McGill Student Identification Number if you prefer) _____
2. Gender: _____Male _____Female
3. Occupation/Profession_____
4. Highest Level of Education_____
5. Age group (please check appropriate box)

☐ 18-21
☐ 22-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60 +

6. Mother tongue / First language _____
   Other Languages (spoken and/or written) _____
   _____ _____
7. Reason for taking an English course at McGill University (please check box)

☐ Professional
☐ University preparation
☐ Personal interest
☐ Other (specify)_____

8. Do you have access to the Internet at home, at work, or at some other location?

☐ YES
☐ NO

9. How much time per week can you devote to homework assignments?

☐ 1 hour – 2 hours

☐ 3hours

☐ 4 hours
☐ 5 - 6 hours

10. What kind of learner are you? (Please check the statements that apply to you. You may select more than one.)

☐ I like to work independently.
☐ I prefer to work in pairs/groups.

☐ I learn through theoretical study.
☐ I learn through practical application.
☐ I am a visual learner.
☐ I am an auditory learner.
☐ I learn best when (please complete the statement)_____
_____
_____
_____
____

11. Do you have any experience with any of the following? (Please check the boxes that apply to you.)

☐ WebCT VISTA
☐ Microsoft Word
☐ Microsoft PowerPoint
☐ Chats (instant messengers)
☐ Discussion Forum
☐ Listserv (email discussion list)
☐ Blogs
☐ Pod casts
☐ Wikis
☐ Videoconferencing
☐ Virtual worlds (ex. Second Life)

APPENDIX B: Motivation questionnaire

To complete this questionnaire, please circle the number from 1 (Strongly Disagree) to 5 (Strongly Agree) that best corresponds to your opinion about each statement below. There is no right or wrong answer. Be as truthful as you can about each response.

Motivation towards the learning environment

1. I like online writing activities.
2. I like in-class writing activities.
3. I would rather study English in class with my instructor and classmates than study independently.
4. I like interacting with my instructor and classmates using the WebCT online communication tools.
5. I like the "hybrid" format of the course (i.e. in-class meetings every two weeks; self-instructional online modules every other week)
6. I would prefer that this course be completely online.

APPENDIX C: Questionnaires

Hybrid Course Survey

This survey is not an evaluation of the course. It will serve to assess the impact of instructional technologies on learning. Your contribution is indispensable, and we greatly appreciate it. Please respond to the questions below by checking the box that best represents your opinion.

1. Based on your experience, does the hybrid format of the course demand more or less work than the traditional (classroom) format? ☐ more work ☐ less work ☐ just as much work
2. According to you, does a hybrid course demand more or less discipline than a traditional course? ☐ more discipline ☐ less discipline ☐ no difference
3. Does being obliged to come to class help you to discipline yourself for the online part of the course? ☐ it helps a lot ☐ it does not help at all ☐ it helps somewhat
4. According to you, is it more or less difficult to manage your time in a hybrid course? ☐ more difficult ☐ less difficult ☐ no difference
5. According to you, does a hybrid course offer more or less flexibility for the work required than a traditional course does? ☐ more flexibility ☐ less flexibility ☐ no difference
6. At the moment of selecting a course, how important is the flexibility of time that a course offers?

☐ very important ☐ somewhat important ☐ not important
7. According to you, does the hybrid course generate more or fewer exchanges between you and the other students than the traditional course does? ☐ more exchanges ☐ fewer exchanges ☐ as many exchanges
8. According to you, does the hybrid course generate more or fewer exchanges between you and the lecturer than the traditional course does? ☐ more exchanges ☐ fewer exchanges ☐ as many exchanges
9. In general, would you say that the hybrid format favours student learning? ☐ Yes, a lot ☐ No, not at all ☐ Somewhat
10. What format of an English writing course seems to better suit your needs and your situation? ☐ a traditional course ☐ a hybrid course ☐ an e-learning course

Course Evaluation Questionnaire

SUMMARY OF EVALUATION RESULTS

QUEST- NO.	VALID REPLIES	RESPONSE BREAKDOWN					PERCENT BREAKDOWN					STD MEAN	DEPT DEV	COURSE MEAN	FIRST LINE OF QUESTION TEXT
		1	2	3	4	5	N/A	1	2	3	4	5	N/A		
Q001	6				3	3					50	50		4.5	0.5	4.2	4.2	OVERALL, THIS IS AN EXCELLENT COURSE.
Q002	6				3	3					50	50		4.5	0.5	4.2	4.2	OVERALL, I LEARNED A GREAT DEAL FROM THIS COURSE.
Q003	6					6						100		5.0	0.0	4.4	4.4	M.F. : OVERALL, THIS INSTRUCTOR IS AN EXCELLENT TEACHER.
Q004	6				2	4					33	67		4.7	0.5	4.3	4.3	M.F. : OVERALL, I LEARNED A GREAT DEAL FROM THIS INSTRUCTOR.
Q005	6				1	5					17	83		4.8	0.4	4.3	4.3	M.F. : THIS INSTRUCTOR PROVIDED USEFUL FEEDBACK ON MY PROGRESS IN THE COURSE.
Q006	6				2	4					33	67		4.7	0.5	4.5	4.4	M.F. : THIS INSTRUCTOR WAS UP-TO-DATE WITH THE SUBJECT MATTER.
Q007	6					6						100		5.0	0.0	4.5	4.4	M.F. : THIS INSTRUCTOR WAS WELL-PREPARED AND ORGANIZED.
Q008	6					6						100		5.0	0.0	4.6	4.6	M.F. : THIS INSTRUCTOR RELATED TO STUDENTS IN WAYS THAT PROMOTED MUTUAL RESPECT.
Q009	6				4	2					67	33		4.3	0.5	4.4	4.4	THE GENERAL ATMOSPHERE IN THIS COURSE WAS GOOD FOR LEARNING.
Q010	6				1	5					17	83		4.8	0.4	4.4	4.3	THE COURSE OBJECTIVES WERE CLEARLY EXPLAINED AND THE COURSE CONTENT MATCHED THESE OBJECT
Q011	6				4	2					67	33		4.3	0.5	4.1	4.1	IN GENERAL, THE LEVEL OF DIFFICULTY IN THIS COURSE WAS APPROPRIATE.
Q012	6			1	2	3				17	33	50		4.3	0.8	4.2	4.2	I WOULD RECOMMEND THIS COURSE TO OTHER STUDENTS.
Q013	6				3	3					50	50		4.5	0.5	4.2	4.2	THE COURSE MATERIALS (E.G., READINGS, LECTURE NOTES, IN-CLASS EXERCISES) CONTRIBUTED TO
Q014	6			1	3	2				17	50	33		4.2	0.8	4.2	4.2	THE EVALUATION METHODS USED IN THIS COURSE WERE FAIR AND APPROPRIATE.
Q015	6		3	3				50	50					2.5	0.5	3.9	3.9	THE PHYSICAL FACILITIES PROVIDED FOR THIS COURSE WERE APPROPRIATE (E.G. CLASSROOM/LAB SP
Q016	6			2	4					33	67			3.7	0.5	3.9	3.9	THE ADMINISTRATIVE SUPPORT SERVICES FOR THIS COURSE WERE APPROPRIATE. (E.G., TECHNOLOGY

*** DEPT MEAN = Sum of all valid responses for this question in all courses in the department/number of such responses
*** DEPT COURSE MEAN = Sum of the means for this question for all courses in the department/number of courses in the department

APPENDIX D: Ethics approval

McGill

Research Ethics Board Office
McGill University
845 Sherbrooke Street West
James Administration Bldg., rm 419
Montreal, QC H3A 2T5

Tel: (514) 398-6831
Fax: (514) 398-4644
Ethics website: www.mcgill.ca/researchoffice/compliance/human/

Research Ethics Board I
Certificate of Ethical Acceptability of Research Involving Humans

REB File #: 79-0907

Project Title: Second language (L2) writing anxiety in a classroom versus a web-based environment

Principal Investigator: Effie Dracopoulos
Department: English & French Language Programs, Continuing Education

Status: Master's student (Université de Québec) **Supervisor:** Prof. François Pichette (Univ de Québec)

Funding Agency and Title: N/A

Expedited Review X

This project was reviewed on September 5, 2007 by Full Review ____

Elaine Weiner, Ph.D.
Acting Chair, REB I

Approval Period: September 17, 2007 to September 16, 2008

This project was reviewed and approved in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Subjects and with the Tri-Council Policy Statement: Ethical Conduct For Research Involving Humans

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*All research involving human subjects requires review on an annual basis. A Request for Renewal form should be submitted at least one month before the above expiry date.
*If a project has been completed or terminated and ethics approval is no longer required, a Final Report form must be submitted.
*Should any modification or other unanticipated development occur before the next required review, the REB must be informed and any modification can't be initiated until approval is received.