

STUDENT ATTITUDES TOWARD BLENDED AND ONLINE COURSES:  
A COMPARISON OF STUDENTS IN TRADITIONAL CLASSROOM  
WRITING ENVIRONMENTS AND STUDENTS IN  
BLENDED WRITING ENVIRONMENTS

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## ABSTRACT

This study presents a mixed methods investigation of student attitudes toward blended and online courses. Specifically, the study compares two groups of university freshmen writing students. These groups respectively took writing classes in traditional classroom environments (without individual computers for each student in the classroom) and in blended classroom environments (with individual computers for each student in the classroom). The research questions were the following:

RQ1: What are some of the general prevailing student attitudes toward blended classroom environments and online classroom environments?

RQ2: If students take writing courses in a blended environment, will their attitudes toward blended and online education differ from the attitudes of students who only take traditional writing courses?

RQ3: Will students who take blended writing courses have more favorable attitudes toward blended and online learning than students who do not take writing courses in blended environments?

To answer the above research questions, a set of specific questions was presented as part of a survey to the students in both groups. Also, some qualitative data were generated in response to three open-ended questions about blended and online courses. The survey results were analyzed statistically and the qualitative data were subjected to corpus analysis and specific interpretation. Overall, the attitudes expressed by the students in this research suggest that there are some major differences between student groups in terms of their general attitudes to blended

and online learning. The quantitative analysis showed statistically significant support for the idea that students with previous experience in blended classrooms have more favorable attitudes toward blended and online courses than students without previous experience in blended classrooms. The qualitative results showed a wide range of expressive and divergent opinions among all of the respondents, and the results also provided revealing answers to the research questions.

## DEDICATION

This dissertation is dedicated to my parents, Lee and Lorraine Johnson, who sacrificed their resources to provide me with a valuable first-class education from an early age. They continue to support my decisions and they will always remain stable anchors in my life. This work is also dedicated to my wife, Sybil Baker, as well as her family, who have all been strong and unwavering sources of continual support throughout the entire process of application for the doctorate to the final completion of this degree. Finally, I would like to thank my brother Kyle for all of his love and support throughout my life.

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## CHAPTER 1

### INTRODUCTION

This study is a mixed methods investigation of student attitudes toward blended and online courses. Specifically, it compares two groups of freshmen writing students at a mid-sized, teaching-based university. These groups took mandatory general education English writing courses in traditional classroom environments (without individual computers for each student in the classroom) as well as in blended classroom environments (with individual computers for each student in the classroom).

#### **Definition of Terms**

Forty years ago, Malcolm Knowles produced an authoritative work, which examined a wide range of the original theories of learning, from seminal authors such as Ebbinghaus, Thorndike, Gagne, Skinner, Hilgard, Rogers and Bloom (Knowles, 1973). Among other concepts explained in his book, Knowles examined learning in terms of Thorndike's principles of learning, and then used several case studies (such as Rogers' student-centered approach) from the field of psychotherapy to explain how adults learn. In addition, the book provided some compelling arguments that showed how different the process of teaching adults is to that of teaching children. In general, the book concludes that adult learners prefer more autonomy and greater control over their learning experiences. Specifically, adult learners need to be engaged in terms of their individual self-concept, the role of their previous experiences, a general readiness to learn, and their positive orientation to the learning experience (Knowles, 1973).

As things stand in 2013, there are a wide variety of delivery methods available to all kinds of students, but the newer delivery methods seem especially suited to the needs of adult learners. Each of the burgeoning new delivery methods has a number of advantages and disadvantages, as will be explained and discussed. As a basic outline of some of these delivery methods, however, Kim (as cited in Naaj, Nachouki, & Ankit, 2012, p. 187) has defined several categories of learning, categorized briefly as follows:

- formal, course-scheduled, physical class learning (traditional);
- formal, course-scheduled, face-to-face interaction-based learning;
- formal, class-scheduled and course-scheduled e-learning;
- informal, class-scheduled and course-scheduled physical class learning;
- informal, unscheduled e-learning.

All of these learning styles exist as their own categories, but they sometimes overlap and can be combined in each educator's specific pedagogical approach. For example, both comprehensive and situation-specific models can be used in blended learning environments as well as online learning environments (Rothwell & Kazanas, 2008). Specifically, some of these models could incorporate pedagogical aspects of Kemp's Instructional Design Model, Kirkpatrick's Learning Evaluation Model, Bloom's Taxonomy of Learning Domains, and Gagne's Nine Steps of Instruction (Roytek, 2010; Ryder, 2011). However, to explain the general types of learning that will be explored in this study, it is useful to condense Kim's broad concepts into the following specific categories.

## **Traditional Courses**

These are courses “with no online technology used” (Allen & Seaman, 2003, p. 6). Actually, since this statement was made ten years ago, these kinds of traditional courses have often now come to mean that very few parts of the course (but not none at all) are delivered in an online format. The majority of each lesson is conducted without using the online capabilities of computers, even though a small online component might exist as a supplementary tool for the instructor to use (for example, the distribution of syllabi through a learning management system). In this study, one group of respondents took these kinds of traditional writing courses (without individual computers for each student in the classroom).

## **Blended Courses**

These are courses that “blend online and face-to-face delivery... (and) a substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings” (Allen & Seaman, 2003, p. 6). Blended courses combine multiple delivery media that complement each other and promote learning and application-learned behavior (Smith & Dillon, 1999). These kinds of courses are delivered in a partly online format, where the material is often presented in a way that encourages asynchronous learning. In this study, the second group of respondents took these kinds of writing courses (with individual computers for each student in the classroom). Overall, blended courses offer a combination of traditional and online styles of learning. Blended courses represent “an opportunity to integrate the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning” (Thorne, 2003, p. 2). Further ramifications of blended courses will be examined in this paper.

## **Online Courses**

These are courses “where most or all of the content is delivered online... (and students) typically have no face-to-face meetings” (Allen & Seaman, 2003, p. 6). Therefore, 100% of these courses are delivered in an online format. Again, modern online courses can sometimes incorporate some face-to-face meetings, but these meetings are often de-emphasized in favor of online interaction. It is expected that these kinds of courses will become much more popular in university environments in the future, due to the proliferation of MOOCs (Bruni, 2013; Kolowich, 2013); budgetary concerns, attitudes of accreditors, funders and parents, and the burgeoning need to serve more students each semester (Bruni, 2013; Hardy, 2011; Hagemeyer, 2013; Martin, 2010; Mangu-Ward, 2010; Maranto & Barton, 2010). Specifically at UTC, it has been predicted that “more general education classes could be offered online as soon as the fall 2013 semester” (Gaston, 2012, p.1). This trend seems to have been gaining more and more momentum over the past few years (Bruni, 2013; Jaggars & Bailey, 2010; North, personal communication, 15 February, 2013), and it shows little sign of abating.

Also, this trend is an important one in the context of determining student attitudes to blended and online courses. It has been found (Behjat, Yamini, & Bagheri, 2011; Castaño-Muñoz, Duart, & Sancho-Vinuesa, 2013) that students who have already had exposure to computers in their classrooms have showed improved writing skills compared to students without exposure to computers in their classrooms, and they have also been more amenable to taking courses that are delivered entirely online. According to a recent meta-analysis by the U.S. Department of Education, student learning outcomes in online courses can sometimes be superior to those in traditional face-to-face courses. However, the report “does not present

evidence that fully online delivery produces superior learning outcomes for typical college courses, particularly among low-income and academically underprepared students” (Jaggars & Bailey, 2010, p. 1). Therefore, individual student profiles seem to make a big difference to the attitudes they have toward blended and online courses.

Another example of some previous findings is the CCCC (2004) Position Statement on Teaching, Learning, and Assessing in Writing Digital Environments, an article that outlines some of the major differences between teaching writing in traditional and computer classrooms (Palmquist, Kiefer, Hartvigsen, & Goodlew, 1998). While this article is perhaps a little dated now, there have been a plethora of more recent examples. Some of these examples would include a description of how prevalent computer-based writing courses are becoming in the state of Georgia (Badertscher, 2011; Gaston, 2012), Tennessee (Hardy, 2011; Gaston, 2012), nationwide (Moos & Azevedo, 2009), and worldwide (Kamenetz, 2013).

As discussed in all the above-mentioned articles, the current ideas and findings seem to indicate an ongoing trend toward using social media and other online tools in classroom environments (Berrett, 2013; Chevalier, 2012; Hagemeyer, 2013; Maranto & Barton, 2010; Martin, 2010), and also moving many more general education courses into online environments, mostly due to budgetary concerns and the need to serve more students (Bruni, 2013; Gaston, 2012).

### **Flipped Classroom**

A flipped classroom uses technology like streaming videos such as those available on Khan Academy to facilitate active learning in a classroom. In this way, teachers can spend more time interacting with students and helping them individually, rather than simply delivering a one-size-

fits-all lecture. The idea is to de-emphasize lecturing and emphasize active problem-solving by the students instead (Kolowich, 2012; Ronchetti, 2010). As will be discussed in Chapter V, flipped classrooms are becoming increasingly popular in schools and universities and are considered by some to be part of the future of education.

## **Corpus**

A helpful definition of a corpus in the context of this study can be “a collection of pieces of language text in electronic form, selected according to external criteria to represent, as far as possible, a language or language variety as a source of data for linguistic research” (Sinclair, 2004, para. 12). As can be seen in Chapter IV, a simple corpus was created to represent some useful ways of demonstrating the major themes and ideas inherent in the large body of textual material that was collected.

## **Purpose Statement**

The purpose of this study is to compare introductory writing student attitudes toward blended and online environments. The mixed methods approach taken in this study offered a survey that was supplied to two groups of students: those in blended classroom environments (with individual computers) and those in traditional classroom environments (without individual computers). As discussed in Chapter V, the results of this study might be used to recommend some steps universities and other institutions can take to incorporate more blended and online courses in the future.

### **Research Question 1**

What are some of the general prevailing student attitudes toward blended classroom environments and online classroom environments?

### **Research Question 2**

If students take writing courses in a blended environment, will their attitudes toward blended and online education differ from the attitudes of students who only take traditional writing courses?

### **Research Question 3**

Will students who take blended writing courses have more favorable attitudes toward blended and online learning than students who do not take writing courses in blended classroom environments?

### **Limitations**

The idea of having individual computers for each student in the classroom allows for very different pedagogical approaches, with those students in computer classrooms often being required to research, write, and respond on computers during class. It is worth noting that students at some universities can already choose to take freshman composition in a traditional classroom or a computer classroom when they register, as long as enough spaces are available (North, 2010). This suggests that students in a computer classroom may already be more open to using computers almost exclusively and may then also have more favorable attitudes to online

courses in general. This is an aspect that will need to be examined in greater detail in further studies.

Some further limitations might include misinformed perceptions of blended and online learning by some of the respondents, the role of the instructor and the role of student motivation, as well as a general discrepancy of technological skills on the part of many of the respondents. Surely, not all of the respondents in a study such as this would be at the same level of technological proficiency (as discussed in detail by Badertscher, 2011), and so this may have affected their responses.

### **Delimitations**

In this study, freshmen English students at a teaching-based university were provided with a survey. Since this survey was not distributed to students at a research-based university, the results may have been affected by this fact. Perhaps some of the respondents in this study prefer the relatively small student numbers and the discussion-based classes of a teaching-based university. Since many survey respondents in this study were first generation students, they might have also benefited from discussion-based classes more than students that are accustomed to working online and are used to doing more autonomous work. It is possible that if blended and online learning courses become more popular, the results of this study might suggest that a large number of students, including some of those who took the survey, may actually be opposed to these kinds of courses.

## CHAPTER II

### LITERATURE REVIEW

#### **History and Development of Blended and Online Courses**

While blended courses might seem fairly modern, they have actually had quite a long history (Bonk & Graham, 2006), beginning as far back as the 1920s when they were known as *supervised correspondence studies*. In addition, Bersin argues that “organizations have been trying to apply technology to the learning and training process” (Bersin, 2004, p. xiii) since computers first became widely available in the 1960s. Several researchers (Bersin, 2004; Bonk & Graham, 2006; Rossett, 2002) have used this concept to describe how e-learning is hardly the first time that technology has significantly influenced learning. In 2002, Elliott Masie commented that the Internet is merely the culmination of wave after wave of technological innovation in learning (Masie, 2002), and his comments still hold great validity in the modern world of e-learning. Blended courses “integrate the use of the Internet with a rich variety of other approaches and technologies to create an integrated learning experience” (Bersin, 2004, p. xiv). Furthermore, it seems that blended environments might encourage students to use external resources more when they are writing in the classroom.

Table 1 (adapted from Bersin, 2004) shows how technology-based learning has developed and progressed rapidly over the years, from instructor-led training to mainframe-based computer-based training, to distance learning, to CD-ROM training, then to first generation web-based training, and finally into integrated blended learning. While this overall progression has taken place since at least the 1950s and 1960s, it is prudent and important to remember that the current

phase of technological development only started in about 2002, but it has been progressing extremely rapidly since that time.

Table 1 The development of technology-based learning (adapted from Bersin, 2004).

1. <b>Instructor-Led-Training (ILT)</b>	2. <b>Mainframe-Based Computer-Based Training 1960-1970s</b>	3. <b>Satellite of Ground Based Video “Distance Learning” 1980s-1990s</b>
4. <b>PC-based CD-ROM “CBT” 1980s-1990s</b>	5. <b>First generation web-based training Virtual Classroom E-learning 1998-now</b>	6. <b>Integrated Blended Learning Web, Video, Audio, Simulations, ILT and more 2002...</b>

From informal observations of faculty members at higher-learning institutions, it seems that the benefits of blended and online courses have not even been acknowledged by a vast number of educators yet, especially in the United States. However, the ongoing progression of technology certainly does present a much wider range of options to learners, such as audio, visual, and tactile forms of learning (Caldwell, 2007). This is significant because it has been effectively argued that “people perform better when they have a mix of modalities and methods of learning” (Carman, 2005, p. 1). The addition of different forms of delivery would seem to support the needs of students who might perhaps not be quite as comfortable with traditional lecture-based classes.

Blended courses should ideally be based “on an appropriate blend of learning theories, such as those put forward by Keller, Gagné, Merrill, Bloom, Clark, and Gery” (Carman, 2005, p. 8). In addition, blended courses generally offer a combination of five key ingredients (Carman, 2005), including live events, online content, collaboration, assessment, and reference materials. Blended courses can be “synchronous, asynchronous, instructor-led, self-study, self-study with

subject matter expert, and computer-based” (Behjat, et al., 2011, p. 231). Again, the combination of all these different styles of delivery can appeal to a wide variety of learners who might all have different preferred ways of absorbing material.

### **Blended Courses as Pedagogical Tools**

While a growing number of students and faculty members have indeed embraced these permutations, blended courses are still not exactly pedagogical staples of the academic mainstream. However, when courses have been delivered in a blended format, it has often been the case that students have realized the considerable benefits of blended courses, such as improved pedagogy, better access and flexibility, and increased cost-effectiveness (see, for example, Bonk & Graham, 2006). Also, Lin found that the “blended mode has the potential benefits of making courses more accessible and learning more convenient for students, providing faculty with greater flexibility in how they structure their time” (Lin, 2008, p. 58). When applied to composition courses in particular, blended courses have been found to increase peer interaction, and encourage “writing about real things, and writing for an audience... as a result, the success rate has increased, the standards have been raised, and the course is much better. Students are more engaged, while faculty members spend less time on group instruction and more on individual instruction” (Albrecht, 2006, p. 4). However, some challenges of blended courses have also been identified, such as the need for professors to keep both virtual and physical office hours, the need to keep updating technological skills, and the need for professors to determine an appropriate amount of time online (Lin, 2008; Kim, 2007). These issues will be explored in greater detail in Chapter V.

While it is necessary to acknowledge the challenges involved, many observers have

pointed out that blended courses can be ideal precursors to moving courses completely online (Finch & Jacobs, 2012; Lehmann & Chamberlin, 2009; Mangan, 2012). This idea makes sense in terms of the current blended courses that are available, which “build on years of experience but apply new technologies and delivery options that will continue to change” (Bersin, 2004, p. 13). It will be interesting to see the range of new technological options that will surely become available in the ongoing development of blended courses.

### **Online Courses as Pedagogical Tools**

In higher education environments, online courses (which can often result as a natural progression of blended courses) have recently become considerably more important. The Sloan-C report *Staying the Course: Online Education in the United States, 2008* indicates that the growth rate of online enrollments for that year was 12.9%, compared with 1.2% overall U.S. growth in higher education enrollments, and more than 20% of all U.S. higher education students took an online course in the fall semester of 2007 (Allen & Seaman, 2008). In addition, in 2009, it was stated that 44% of American post-secondary students were taking some or all of their courses online (Ambient, 2009). Presumably, these percentages would be even higher if the same surveys were presented in 2013.

However, even with this clear trend toward online courses, it seems that “the art of facilitating the learning process in an asynchronous virtual environment is (still) in its infancy” (Crawford & Rausch, 2012, p. 104). There is a need to develop online courses more quickly and in greater depth, since it certainly seems that there is a strong desire among thousands of prospective students to take online classes (Bruni, 2013; Gaziano & Liesen, 2004; Hardy, 2011; Lewin, 2012). Several previous studies have provided important indications of student attitudes

to online courses (for example, Castaño-Muñoz, Duart, & Sancho-Vinuesa, 2013; Dodero, Fernandez & Sanz, 2003; Gaziano & Liesen, 2004; Lin, 2008), and the results of the current study will examine these ideas specifically in the context of blended courses as well. Indeed, it now seems that “students expect a learning experience that is personalized, immediate, and connected” (Walston, 2012b, para. 1). Many of these kinds of students seem to be attracted to online courses primarily because they can learn at any time, at their own pace, and have the ability to interact electronically to a greater degree with the teacher and other students (Bruni, 2013; Gaziano & Liesen, 2004; Mangu-Ward, 2010; Lewin, 2012). While some of these assumptions might actually be a little misguided in the real world, it could be argued that today’s digitally-minded students often tend to have quite favorable perceptions of both blended and online courses.

As mentioned above, another strong case for online courses is that they have been used to facilitate much more one-on-one teaching, which in turn has been demonstrated to be more effective and engaging than simply using a traditional classroom approach (Mangu-Ward, 2010; Thorne, 2003). While this seems to be true especially in the field of Second Language Acquisition (Lightbown & Spada, 2006) and for children with special needs (Mangu-Ward, 2010), the goal of achieving more one-on-one teaching is also applicable in other areas. In all of the situations discussed above, the act of putting sections of a course online can be intellectually challenging and certainly should encourage instructors as well as students to think more carefully about the teaching and learning goals that have to be achieved (Smith, Ferguson, & Caris, 2001; Walston, 2012a). Therefore, the migration of courses to an online environment is not a process that can be taken lightly.

In November 2012, the *Chronicle of Higher Education* produced a special report on

online courses in general. Among other things, this report examines the burgeoning phenomenon of massive open online courses, or MOOCs. Harvard and MIT have already developed EdX, Stanford is developing Coursera and Class2go, and other startups like Udacity and Khan Academy are also attracting hundreds of thousands of students (Bruni, 2013; Pappano, 2012). However, these courses are certainly not ideal for every kind of student. In general, it seems that “MOOCs are great for self-directed, self-motivated, intellectually curious students who have a command of basic and essential college-level skills, especially reading comprehension and analytical writing” (Foster Segal, 2013, commenter 14ematode). Some further implications of these MOOCs will be examined in detail in Chapter V.

In conjunction with this phenomenon, the *Chronicle* also produced a free webinar (Walston, 2012) called “The New Rules for Online Learning: A Perspective from Blackboard Leadership”. Some specific arguments presented in this webinar are that “the prevailing online learning models in place over the past decade now seem out of date... institutions are experimenting with new approaches for online education by launching MOOCs, integrating and sharing open education resources, and enhancing the learning experience for socially connected students” (Walston, 2012, para. 1). Furthermore, the webinar argues in favor of Blackboard as a powerful learning management system (LMS) tool, which “is helping institutions grow enrollments, lower the cost of academic delivery and improve student outcomes” (Walston, 2012, para. 2). In this way, Blackboard is “responding to institutions’ needs for enrollment growth in, and delivery of, online courses by partnering with institutions with customized Online Program Management that drives revenue and student retention” (Walston, 2012, para. 4) as well as “enabling cost-effective growth of online and blended delivery” (Walston, 2012, para. 4). It

seems that Blackboard, as a popular LMS, can already act as a helpful tool for instructors to use when thinking about putting their courses online.

### **Professor Attitudes to Blended and Online Courses**

Due to professor resistance and other factors (see, for example, Carr, 2013 and Kolowich, 2013), it can sometimes be difficult for universities to implement either blended or online courses. While some tenure-track faculty members have shown a willingness to teach online classes, national data indicate that tenure-track faculty sometimes seem to be resistant to building online classes (Carr, 2013; Kirschner, 2012; Kolowich, 2013; North, personal communication, 15 February, 2013). At places like Harvard, several liberal arts professors have been protesting “the rush to embrace MOOCs, which they worry will undermine the personal, intellectual connection inherent to a liberal arts education” (Carr, 2013, p. 2). Certainly, there are some valid reasons for faculty members to be wary of these new developments.

In response to this resistance, it has been argued for many years that the roles of teachers and professors have gradually been changing from being mostly authoritarian into roles in which teachers are mostly facilitators (Behjat, et al., 2011; Knowles, 1973). However, many professors have seemed slow to embrace the idea of students now being much more “active controllers of their learning process” (Behjat, et al., 2011, p. 231). It has been clear for quite some time that blended learning systems change the way learners learn, but also change the way teachers teach (see, for example, Naaj, et al., 2012). Still, some higher education administrators such as President Catharine Hill of Vassar College continue to offer reservations about blended courses, because she asserts that there is not enough available information “about the quality implications or the cost implications” (Marklein, 2012, para. 12).

Of the national faculty members that have actually taught online courses, the results are

more positive. A recent survey of 10,720 faculty members found that about 35% of all faculty members have taught an online course at some point. Nearly 82% of the respondents agreed that online courses meet student needs for flexible access, and nearly 71% agreed that online courses are the best ways to reach particular students (The Digital Campus, 2010). It will be interesting to see if the current student survey results provide any support for these findings. These results will be explored in greater detail throughout Chapters IV and V.

Also, there is a lot to be said for the capability of reaching a larger number of students in the same amount of time. Largely due to the replicable and expandable nature of online classes, the same number of professors can serve a higher number of students (Lewin, 2012). Moreover, with the appropriate training, lower-rank faculty members or adjuncts can also conduct online classes arguably as competently as full professors (Lewin, 2012). In fact, blended courses have often been used to “change the quality of learning in addition to factors such as convenience, facility usage, and student (and faculty) satisfaction” (Albrecht, 2006, p. 5). However, even with all these positive developments, it has been shown that there is an ever-widening gap between the salaries of lower-rank faculty members and adjuncts and those of full professors (Lewin, 2013; Selingo, 2013). As applied to launching of courses as MOOCs, there are also several unanswered questions. For example:

There are gnarly intellectual-property issues: if a professor launches a MOOC class at Harvard (an edX property) and then takes a job at (Stanford) (Coursera), who keeps the online course? Will untenured professors, who may have to find jobs elsewhere, be discouraged from MOOC-making? While nonselective institutions winnow staffs and pay licensing tithes to the élite powers, MOOCs offer substantial opportunities to academic stars, who might aspire to have their work reach a huge international audience (Heller, 2013, p. 7).

These kinds of concerns mean that there is a limited number of qualified professors available to teach online classes, as well as considerable faculty opposition to online learning (Kirschner, 2012; Kolowich, 2013), even though it has been shown that “addressing the effectiveness of learning comes only through substantial faculty efforts to take advantage of the technology” (Albrecht, 2006, p. 5). But, there continues to be “a suspicion of technology, a lack of institutional support or motivation, and an inexperience with technology” (Albrecht, 2006, p. 7) among a large percentage of national faculty members. Perhaps this perception will start changing with the increasing use of technology in education. Also, more equitable salary and benefits packages would surely be useful ways of recruiting adjuncts and other instructors who can often teach the same material as full professors but at a far lower cost to universities that are often struggling to stay afloat (Selingo, 2013). However, there is considerable opposition to this idea, as witnessed by the following excerpts from a controversial letter to Harvard’s Michael Sandel from the Philosophy Department at San Jose State University:

We believe the purchasing of online and blended courses is not driven by concerns about pedagogy, but by an effort to restructure the U.S. university system in general, and our own California State University system in particular. If the concern were pedagogically motivated, we would expect faculty to be consulted and to monitor quality control. On the other hand, when change is financially driven and involves a compromise of quality it is done quickly, without consulting faculty or curriculum committees, and behind closed doors (The Document, 2013, p. 3).

Good quality online courses and blended courses (to which we have no objections) do not save money, but purchased pre-packaged ones do, and a lot. With these pre-packaged MOOCs and blended courses, faculty (members) are ultimately not needed. A teaching assistant would suffice to facilitate a blended course, and one might argue, paying a university professor just to monitor someone else’s material would be a waste of resources (The Document, 2013, p. 4).

## **Student Attitudes to Blended and Online Courses**

Apart from the above kinds of financial and socio-economic ramifications of MOOCs, blended and online courses may help lower the student costs of education, which is especially important when they are having to deal with tuition costs that seem to be increasing exponentially and perpetually (McArdle, 2012). It seems that there would be many students who would like to take some online courses during their undergraduate years and beyond (see, for example, Pappano, 2011). In addition, many previous studies (Behjat, Yamini, & Bagheri, 2011; Castaño-Muñoz et al, 2013; Gaziano & Liesen, 2004; Kearsley, 2000; Mangan, 2012; Movahedzadeh, 2011; Schaber, et al, 2010; Smart & Cappel, 2006) suggest that blended courses offer several advantages over the other two styles. For example, Kearsley (2000) states that the most significant applications of communication in virtual learning environments are discussion forums, which provide a way for participants to extend classroom discussions. They provide better cognitive and exploratory learning (Haggerty et al., 2001), increased student-to-student discussion and cooperation (Kassop, 2003), superior learner empowerment (Kassop, 2003), and upgraded critical thinking skills (Shapley, 2000; Collison et al., 2000).

Even more recently, blended learning has been proposed as being more effective than face-to-face learning (Castaño-Muñoz, Duart, and Sancho-Vinuesa, 2013), and the mere incorporation of the Internet into face-to-face learning has also been shown to have beneficial effects on academic achievement (Tamim, Bernard, Borokhovski, Abrami & Schmid, 2011). In addition, the encouragement of asynchronous learning offered by blended courses usually allows students more time on their tasks. It therefore accommodates their different learning styles and also maintains a high level of faculty-student interaction (Dukes, Waring, & Koorland, 2006). A blended course “prioritizes active learning, seeks to motivate students, and takes into account the

skills, knowledge, and attitudes that students bring with them to the classroom” (Schaber, Wilcox, Whiteside, Marsh, & Brooks, 2010, p. 3).

Finally, blended courses seem to encourage more student responsibility and accountability, by helping students avoid the “thrive or dive” (Sapp & Simon, 2005, p. 473) phenomenon of not completing the coursework, which continues to be a major criticism of many online writing courses. When operating in blended classroom environments, the goal is for instructors to work with individual students in a more focused way than they might have done in a traditional environment, because the technology can be used to help them monitor each student’s progress at any given time in the semester.

The overall flexibility of blended courses seems to be appreciated by many, but not all, students. Lin (2008) has already revealed some research into some general student attitudes to blended classes, which found that most students held positive views of blended classes, such as the fact that these courses offer multiple modes of delivery, there is often more connectivity and interactivity, and the classes are often structured clearly and are better focused. It will be interesting to see whether or not some or all of these findings hold true when it comes to measuring student attitudes to blended and online courses in the future. The results of the current study will be displayed in detail throughout Chapter IV.

Another factor to consider in higher education in general is the growing popularity of online courses. As of 2013, offering online classes as an option for students has become a reality at many institutions of higher learning, including UTC (Carr, 2013; Jett, 2013). Many incoming students are therefore having to adjust their learning styles to some of the specific idiosyncrasies of online learning applications, such as the technical skills required to use them (Smith, Ferguson, & Caris, 2001; Walston, 2012). These factors are also affecting student attitudes in

general. It has already been established that several factors do actually affect student attitudes to blended and online course environments in general. Some of these factors include the role of the instructor, the use of technology, course management, the level of interactivity, instruction style, course content, culture, student age and gender (Naaj, et al., 2012). All of these factors are important subjects for further research.

In previous findings, many students have expressed the attitude that online courses, and especially artificial intelligence applications, will become even more prominent in the future (Mangu-Ward, 2010). While this may or may not be true, it seems that the fear of artificial intelligence applications completely replacing human teachers is somewhat unfounded, since “some online learning models eliminate human interaction, but the vast majority do not” (Mangu-Ward, 2010, para. 13). In fact, most online courses are only effective in conjunction with significant human input. For example, there is a growing number of professors that seem “excited about various technology-driven trends in higher education, including the growth of e-textbooks and digital library collections”, as well as the idea of “flipping the classroom” (Kolowich, 2012, para. 1). In addition, various computer-driven education tools can only operate properly when controlled by a competent human being. Online courses, as a whole, are not necessarily replacements for traditional classes, but for some professors, they are starting to play a larger role in the instructional design of their syllabi.

A detailed analysis of the above issues in the *Chronicle of Higher Education* seems to have yielded mixed results about “the benefits of online teaching and learning in higher education” (Kim & Bonk, 2006, p.1), including “excitement and enthusiasm”, “a pervasive sense of e-learning gloom”, “disappointment, bankruptcy” and “lawsuits” (Kim & Bonk, 2006, p.1). Previous research suggests that some students might experience some general resistance to

online courses, because they see them as a less worthy form of education (Adams & Defleur, 2005). Some students perceive computer classrooms as having the “potential for cheating; distracting students, mainly with text messaging; creating a have vs. have-not classroom culture; and devices being stolen or used to access inappropriate material” (Badertscher, 2011, para. 6). Also, there also seems to be a large resistance to paying for courses online (Azevedo, 2012). The mostly open and free nature (for example, the ongoing development of MOOCs) of the Internet has meant that users are often accustomed to obtaining information for free online, which can then make it very difficult for universities to charge students for course material. Consequently, this can sometimes lead to the (usually faulty) perception of online courses as being less rigorous and valuable than courses that take place in a more traditional environment (Parthasarathy & Smith, 2009).

Other negative student responses to online courses include poor computer skills, a certain level of technological anxiety, as well as low motivation and an inability to work independently (Gaziano & Liesen, 2004; Holcomb, King & Brown, 2004). It also seems that students often “find themselves very uncomfortable with strictly online learning as they do not feel membership in any group relative to a course, a program, or even a specific university during the learning experience” (Crawford & Rausch, 2012, p. 104). This means that it is vital to involve all students and immerse them in the learning process when operating in an online environment. Finally, “the student dropout rate in online writing courses is significantly higher than it is for students in equivalent face-to-face courses” (Sapp & Simon, 2005, p. 473), mostly because they might feel somewhat abandoned, as explained above.

This all means that student attitudes to online courses are not necessarily going to be favorable, and examining their attitudes to blended and online classes would seem to provide

some further helpful insights into this main issue. However, it also seems that “student satisfaction in blended learning is important because it can impact motivation and, therefore, student success and completion rates” (Naaj, et al., 2012, p. 195). Before initiating any new developments, it is vital to examine how they will affect the student retention rate (North, personal communication, 15 February, 2013). This statement seems to hold true for the majority of national universities.

### **Different Kinds of Classroom Environments**

Within the UTC environment, the courses English 1010 (Composition I) and English 1020 (Composition II) meet the general education requirements of the university and are therefore expected to be taken by all incoming freshmen. There are standard, specific course objectives and outcomes that must be attained by all students, regardless of whether they have access to computers in their classrooms or not. See Appendix A for some examples of the objectives and outcomes of English 1010. Therefore, the kinds of papers that students are expected to produce are the same whether students take these courses in classrooms with computers or in classrooms without them. In addition, as of Fall 2013, certain sections of the English 1010 course will be offered as online courses through a MOOC called Coursera, “with classes divided into 12-minute chunks that often feature animation” (Jett, 2013).

One of the goals of the current study is to explore the effectiveness of using computer-based instruction to teach writing, and to demonstrate that the computer-based writing courses encourage students to write more than they would in other similar classes that are not computer-based (like most of the English 1010 courses). Appendix A contains the following instructions with regard to the required writing output of a typical English 1010 course:

Revised and edited at least four formal projects for a total of 3750-5000 words (approximately 15-20 double-spaced pages).

Therefore, the total number of words written in many of these courses might be no more than 5000. When using computer-based classrooms, part of the syllabus does include the above requirement, but unlike in many of the traditional English 1010 classes, students in these blended classrooms might also be required to complete informal writing projects on almost a daily basis (since it can be argued that these are easier to do when there are computers present). These informal writing projects might include written responses to readings, in-class free writing or responses to peer writings, and they could generally require a length of at least 400 or 500 words per day. It can be projected, therefore, that the students in these kinds of blended classrooms might in fact be required to write about double the amount of their contemporaries in other English 1010 classes.

Currently, most of the writing classes at UTC are being offered in traditional classroom environments, but there are also some blended courses available to students. These blended courses are ones in which the students are provided with computers to use during their writing lessons, which occur in computer-based writing classrooms during regular hours on the UTC campus. These computer-based writing classrooms at UTC have had a relatively long history, with several of the classrooms being established as early as 1993. However, due to budgetary constraints, at the moment, only three classrooms in Holt Hall are equipped with about twenty PowerMac computers in each room. The overall decision to use these kinds of Apple computers in the classrooms has mostly been driven by the relevant department heads of English over the past few years (Grothe, personal communication, October 29, 2011).

In general, most faculty users seem content with the technical operation of the computers and with the overall management of the classrooms (Grothe, personal communication, 29 October, 2011). Also, for students more comfortable using Windows, the computers are also equipped with software called Parallels or VM Fusion, which are Windows emulators for Mac computers (North, 2010). The computers include a function called Remote Desktop, which allows instructors to control the individual student computers from the main computer on the instructor's desk (North, 2010). Finally, all of the rooms contain printers and some of the rooms also are equipped with scanners so that students can convert their hard documents into digital files if necessary.

The computer-based classrooms described above represent environments in which practice-based learning (Chan, 2010) can occur. This is a pedagogical style that allows students access to the Internet and all of its resources at all times, and it requires more hands-on involvement from each student. Therefore, these types of classes fall into the category of blended courses, rather than traditional courses or online courses. Because the students have access to a large amount of course material online, they can effectively do a lot of their classwork outside of class; perhaps more so than in traditional classes. In this way, these kinds of classes satisfy the core principles of a postindustrial paradigm of instruction, which include learner-centered vs. teacher-centered instruction, learning by doing vs. teacher presenting, attainment-based vs. time-based progress, and customized vs. standardized instruction (Chan, 2010; Reiser & Dempsey, 2012, p. 77). The idea of "flipping the classroom" (Kolowich, 2012; Walston, 2012a) seems particularly relevant and useful in these kinds of environments.

Therefore, the computers act as constructivist tools, simply because "students have more opportunities to take control of their learning in a constructivist classroom" (Chan, 2010). One

of the underlying principles of constructivism as applied to a writing environment can be represented by a comment by a noted expert in writing theory, Peter Elbow: “the best test of a writing course is whether it makes students more likely to use writing in their lives” (Elbow, 1991, p. 136). Furthermore, it has been established that increased student activity often leads to increased learning (Pascarella & Terenzini, 2005). Since computer-based writing courses may actually encourage students to write more during class time than they would in other similar classes that are not computer-based, students in these courses are using writing extensively in their daily lives without even necessarily realizing it. This is an appropriate demonstration of problem-based learning, in which students take responsibility for their own development and is thus more student-centered (Savery & Duffy, 2001). This kind of learning (Price, 2009) seems to merge well with some of the expectations of Millennial students when it comes to college classroom environments (see Appendix C for more detail).

All of these arguments provide support for having more university classrooms equipped with computers for use in future writing classes. In this way, it would be possible to expand the number of blended writing classroom environments and thereby offer daily computer access to a larger number of students and faculty members. Appendix D shows some possible ways of increasing the number of blended classrooms, as proposed by UTC’s computer classroom committee (L. Ingraham, personal communication, 28 October 2011).

## CHAPTER III

### METHODOLOGY

#### **Purpose Statement**

The purpose of this study was to compare introductory writing student attitudes toward blended and online courses. The study, using qualitative and quantitative analysis, offered a survey to two groups of students: those in blended classroom environments and those in traditional classroom environments.

#### **Research Question 1**

What are some of the general prevailing student attitudes toward blended classroom environments and online classroom environments?

#### **Research Question 2**

If students take writing courses in a blended environment, will their attitudes toward blended and online education differ from the attitudes of students who only take traditional writing courses?

### **Research Question 3**

Will students who take blended writing courses have more favorable attitudes toward blended and online learning than students who do not take writing courses in blended classroom environments?

### **Subjects**

This study compares two groups of freshmen writing students. These groups respectively took classes in traditional classroom writing environments (without individual computers for each student in the classroom) and in blended writing environments (with individual computers for each student in the classroom). While the traditional classroom writing environments do not offer individual students access to computers, the classrooms are all “Smart Rooms,” which provide the instructor with a computer, access to the Internet, capability to play DVDs and a large screen to display information. UTC also encourages all faculty members to use UTC Online. According to the UTC Online web page:

UTC Online, which is powered by Blackboard Learn, is UTC’s Learning Management System that faculty can use to deliver course content, communicate with students, enable student interaction, and provide online assignments and assessments. UTC Online can be used for traditional face-to-face courses, fully online, or for hybrid courses. Instructors can use UTC Online to fully engage students in learning activities while reducing some of the administrative overhead of managing a class (Faculty, 2012, para. 1).

Questions about classroom experiences and technical proficiency were presented to students in both of the groups, and the results of a survey were obtained from all the participants. Qualitative data were generated in response to three specific, open-ended research questions (as explained above).

## **Procedures and Preliminary Questions**

To obtain the specific details of the classroom environments that were examined, six writing instructors (lecturers) were presented with the following preliminary questions, to which they were asked to provide simple YES or NO answers. The results of this initial investigation are displayed in Table 2.

Do your students regularly use pens, paper or pencils in the classroom?

Do you use UTC Online (Blackboard) for any purpose at all?

Do you use the discussion board function at all?

Does each student in your classroom have access to a computer?

Do you regularly use multimedia in the classroom (for example, Youtube clips)?

Table 2 Graphical representation of students in computer classrooms or traditional ones.

	Paper/pencil in classroom	UTC Online	Discussion board	Computers in classroom	Teacher uses multimedia
Instructor 1 n = 40	YES	YES	NO	NO	YES
Instructor 2 n=60	YES	YES	NO	NO	YES
Instructor 3 n=80	YES	YES	YES	NO	YES
Instructor 4 n=40	NO	YES	YES	YES	YES
Instructor 5 n=40	NO	YES	YES	YES	YES
Instructor 6 n=40	YES	YES	NO	YES	YES

What can be clearly seen from Table 2 is that a blended classroom is equipped with computers in the classroom for each student while a traditional classroom is not. However, the results shown in Table 2 mean that for these freshman composition students, a "traditional" classroom (one that does not contain computers) no longer necessarily fits the older definition of a classroom with just chalk, a blackboard and some uncomfortable chairs, but also sometimes incorporates technology in and out of the classroom. Of the above respondents, 50% of the instructors regularly use paper and pencil in the classroom, while 50% do not. Also, 100% of the instructors use UTC Online but, interestingly enough, only 50% use the discussion board feature. However, the results show that all of the instructors do indeed use some kinds of multimedia applications in some way in their classrooms.

## **Survey**

As depicted in Table 2, one group of students (the research group) took writing classes in blended environments, and the other group of students (the control group) took writing classes in traditional classroom environments. A multiple-choice survey was presented to these groups through the service called Qualtrics, which allows researchers to create customized, web-based surveys (see Appendix B). The survey questions were adapted from previous observations, which "suggest that students are receptive to the continued growth of online classes (Gaziano & Liesen, 2004, p. 11), and support the idea that students often express a multi-dimensional attitude to learning. There was also a section to account for student age and gender (Naaj, et al., 2012), which are two factors that have been shown to influence student attitudes. In addition, there were three open-ended questions that were used to gather qualitative data. The total number of possible survey respondents was approximately 300.

## **Statistical Considerations**

Chapter IV will present a detailed statistical examination of all the results that address the research questions. First, the data were entered into SPSS (Hinkle, Wiersma & Jurs, 2003; Urdan, 2005) and then, a series of independent sample t-tests were performed to compare the differences between the two independent groups (research group and control group) and to measure the mean values between these groups.

## **General Methodology**

There has been extensive research on the benefits of combining qualitative and quantitative techniques (Flick, 2009; Jarratt, 1996). This paper presents a mixed methods approach (Flick, 2009) in order to provide a representative reflection of the range of student attitudes to blended and traditional classroom environments. As discussed above, the quantitative data were obtained by using a survey.

Qualitative research generally comprises three major components: observations, interviews, and document analysis (Flick, 2009). To obtain sufficient qualitative material by the use of document analysis, three open-ended questions were presented to the respondents to allow their responses to be more descriptive and detailed than they might have been when using only quantitative techniques:

- In terms of your writing development, what are some major advantages of working in a blended environment?
- In terms of your writing development, what are some major disadvantages of working in a blended environment?

- Do you think you would be interested in taking any future writing courses entirely online?

Next, a simple word frequency count was performed on the student responses to the final question. The body of data provided as answers to the final question made up a small corpus, and the results of the corpus analysis appear in Chapter IV.

## **Summary**

As pedagogical systems continue to change, educators are faced with the task of building all kinds of new technologies into their classroom environments, which can be a process that can disrupt the entire institutional system of the school or university in which these changes take place (Salter, Richards, & Carey, 2004). For example, the development of blended and online environments in the current era is a very important factor for schools and universities to consider when designing their courses, because future students may in fact demand the option of taking these kinds of courses if they are more comfortable in these learning environments.

Modern educators and students have all been teaching and writing in a culture of rapidly expanding technology (Anson, 1999) for at least the last fifteen years, and it seems like this is a trend that probably will not be ending any time soon. The general trend of the student responses to the survey questions and the open-ended questions seem to support this idea and they also relate to the specific research questions that were examined in this study. All of the student responses are examined and analyzed in detail in the following chapters.

## CHAPTER IV

### RESULTS

As discussed in Chapter III, one group of students (the research group) took writing classes in blended environments, and the other group of students (the control group) took writing classes in traditional classroom environments. In addition to three open-ended, qualitative questions, a multiple-choice survey was presented to about 300 students that were part of these groups. In total, there were 223 survey responses, representing a return rate of nearly 75%. Of these responses, 214 respondents (71%) completed all of the multiple-choice questions, and 208 (69%) completed all of the multiple-choice questions as well as all of the qualitative ones. The ratio of respondents taking/not taking blended classes was 134:81 (in other words, 62% of the respondents had previously taken or were currently taking a writing class in a blended classroom environment, and 38% had not or were not).

The initial analysis below represents the overall results obtained from all of the respondents in response to the first research question. These results represent an accurate measurement of the general prevailing student attitudes toward blended and online courses. In terms of the second and third research questions, the statistical analysis reflects whether the attitudes of students who have taken writing courses in a blended environment differ from the attitudes of students who have only taken traditional writing courses. Also, they reflect whether students who have taken blended writing courses have more favorable attitudes toward blended and online learning than students who have not taken writing courses in blended environments.

Finally, in the qualitative analysis, the results reflect the overall trends and ideas that were recorded in the three open-ended questions at the end.

## Overall analysis

**1.** I prefer writing in a blended classroom environment than in a traditional classroom environment.

#	Answer		Response	%
1	<a href="#">Strongly agree</a>		31	14%
2	<a href="#">Agree</a>		76	35%
3	<a href="#">Neither Agree nor Disagree</a>		51	24%
4	<a href="#">Disagree</a>		46	21%
5	<a href="#">Strongly Disagree</a>		11	5%
	Total		215	100%

Figure 1 Responses to Question 1

Figure 1 demonstrates the degree to which the respondents prefer writing in a blended classroom environment than a traditional classroom environment. Of the 215 respondents, 31 (14%) strongly prefer a blended classroom environment, and 76 (35%) of them prefer a blended classroom environment. Also, 51 respondents (24%) do not have a preference. Finally, 46 respondents (21%) disagree with this statement, and 11 respondents (5%) strongly disagree.

2. I participate less in a blended classroom than in a traditional classroom environment.

#	Answer	Response	%
1	<a href="#">Strongly agree</a>	20	9%
2	<a href="#">Agree</a>	57	27%
3	<a href="#">Neither Agree nor Disagree</a>	68	32%
4	<a href="#">Disagree</a>	59	27%
5	<a href="#">Strongly Disagree</a>	11	5%
	Total	215	100%

Figure 2 Responses to Question 2

Figure 2 demonstrates the degree to which the respondents participate less in a blended classroom environment than a traditional classroom environment. Of the 215 respondents, 20 (9%) strongly agree with this statement, and 57 (27%) agree. Also, 59 respondents (27%) disagree and 11 respondents (5%) strongly disagree. Finally, 68 respondents (32%) do not have a preference.

**3.** Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom.

#	Answer	Response	%
1	<a href="#">Strongly agree</a>	11	5%
2	<a href="#">Agree</a>	53	25%
3	<a href="#">Neither Agree nor Disagree</a>	54	25%
4	<a href="#">Disagree</a>	77	36%
5	<a href="#">Strongly Disagree</a>	20	9%
	Total	215	100%

Figure 3 Responses to Question 3

Figure 3 demonstrates how much the respondents feel that writing in a blended classroom environment is mostly more frustrating than writing in a traditional classroom environment. Of the 215 respondents, 97 respondents (45%) disagree or strongly disagree with this statement. Also, 64 respondents (30%) agree or strongly agree. Finally, 54 respondents (25%) do not have a preference.

**4.** I find traditional classrooms more convenient for writing than blended classrooms.

#	Answer		Response	%
1	<a href="#">Strongly agree</a>		25	12%
2	<a href="#">Agree</a>		57	27%
3	<a href="#">Neither Agree nor Disagree</a>		63	29%
4	<a href="#">Disagree</a>		61	28%
5	<a href="#">Strongly Disagree</a>		9	4%
	Total		215	100%

Figure 4 Responses to Question 4

Figure 4 shows whether or not the respondents find traditional classroom environments more convenient for writing than blended classroom environments. Of the 215 respondents, 63 (29%) do not have a preference. Also, 57 respondents (27%) agree with this statement, and 25 respondents (12%) strongly agree. Finally, 61 respondents (28%) disagree, and only 9 respondents (4%) strongly disagree.

**5.** I can communicate my thoughts better in a traditional classroom than in a blended classroom.

#	Answer		Response	%
1	<a href="#">Strongly agree</a>		25	12%
2	<a href="#">Agree</a>		65	30%
3	<a href="#">Neither Agree nor Disagree</a>		65	30%
4	<a href="#">Disagree</a>		52	24%
5	<a href="#">Strongly Disagree</a>		7	3%
	Total		214	100%

Figure 5 Responses to Question 5

Figure 5 asks whether the respondents can communicate their thoughts better in a traditional classroom environment than in a blended classroom environment. Of the 214 respondents, 65 (30%) do not have a preference. Also, 25 respondents (12%) strongly agree with this statement, and 65 respondents (30%) agree. Finally, 52 respondents (24%) disagree, and only 7 respondents (3%) strongly disagree.

**6.** I often feel uncomfortable in computer-based discussions.

#	Answer	Response	%
1	<a href="#">Strongly agree</a>	15	7%
2	<a href="#">Agree</a>	39	18%
3	<a href="#">Neither Agree nor Disagree</a>	53	25%
4	<a href="#">Disagree</a>	81	38%
5	<a href="#">Strongly Disagree</a>	27	13%
	Total	215	100%

Figure 6 Responses to Question 6

Figure 6 asks whether the respondents often feel uncomfortable in computer-based discussions. Of the 215 respondents, 81 (38%) disagree with this idea, and 27 (13%) strongly disagree. Also, 39 respondents (18%) agree with this statement, while only 15 respondents (7%) strongly agree. Finally, 53 respondents (25%) do not have a preference.

7. I often feel anxious in a traditional classroom.

#	Answer	Response	%
1	Strongly agree	8	4%
2	Agree	50	23%
3	Neither Agree nor Disagree	61	28%
4	Disagree	86	40%
5	Strongly Disagree	10	5%
Total		215	100%

Figure 7 Responses to Question 7

In a related sense, Figure 7 asks whether respondents often feel anxious in a traditional classroom environment. Of the 215 respondents, 86 respondents (40%) disagree with this statement and 10 respondents (5%) strongly disagree. Also, 50 respondents (23%) agree with the statement, and 8 respondents (4%) strongly agree. Finally, 61 respondents (28%) do not have a preference.

8. Working with others is usually more productive in a traditional classroom than in a blended classroo...

#	Answer	Response	%
1	Strongly agree	34	16%
2	Agree	97	45%
3	Neither Agree nor Disagree	44	20%
4	Disagree	32	15%
5	Strongly Disagree	8	4%
Total		215	100%

Figure 8 Responses to Question 8

In Figure 8, respondents were asked whether it is more productive to work with others in a traditional classroom or in a blended classroom. Of the 215 respondents, 97 respondents (45%) agreed that a traditional classroom environment makes it easier for them to collaborate with other students, and 34 respondents (16%) strongly agree. Only 8 respondents (4%) strongly disagree with this statement, and 32 respondents (15%) disagree. Finally, 44 respondents (2%) do not have a preference.

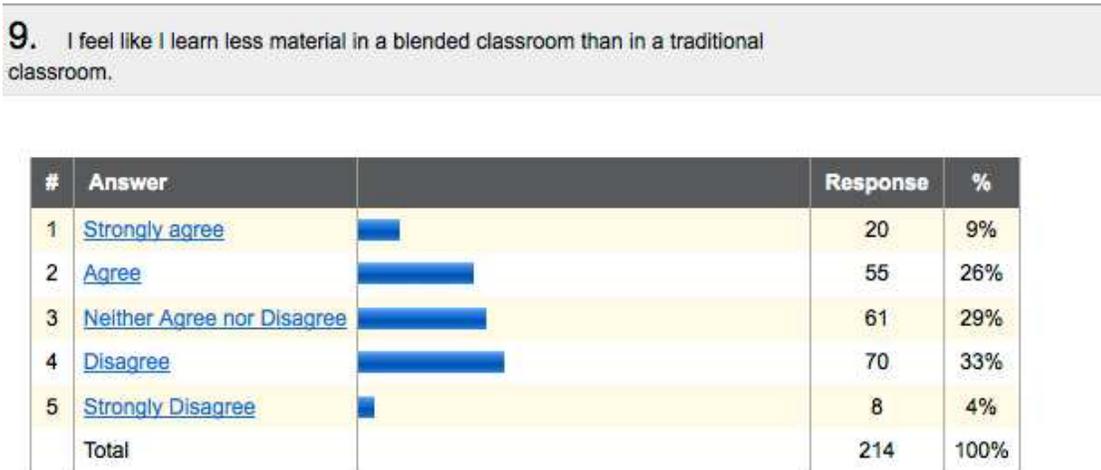


Figure 9 Responses to Question 9

Figure 9 asks the respondents if they feel like they learn less material in a blended classroom environment than in a traditional classroom environment. Of the 214 respondents, 70 respondents (33%) disagree with this statement, and 8 respondents (4%) strongly disagree. Also, 61 respondents (29%) do not have a preference. Finally, 55 respondents (26%) agree with the statement, and 20 respondents (9%) strongly agree.

10. It is usually more challenging to complete writing assignments in a blended classroom.

#	Answer	Response	%
1	<a href="#">Strongly agree</a>	10	5%
2	<a href="#">Agree</a>	54	25%
3	<a href="#">Neither Agree nor Disagree</a>	49	23%
4	<a href="#">Disagree</a>	86	40%
5	<a href="#">Strongly Disagree</a>	16	7%
	Total	215	100%

Figure 10 Responses to Question 10

Figure 10 asks the respondents if it is usually more challenging to complete writing assignments in a blended classroom environment than in a traditional classroom environment. Of the 215 respondents, 86 respondents (40%) disagree with this statement, and 16 respondents (7%) strongly disagree. Only 10 respondents (5%) strongly agree, and 54 respondents (25%) agree. Finally, 49 respondents (23%) do not have a preference.

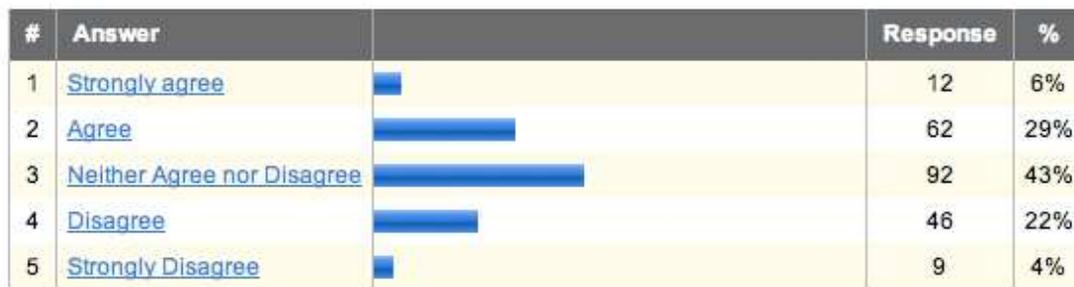
11. I have more contact with instructors in a blended classroom.

#	Answer	Response	%
1	<a href="#">Strongly agree</a>	14	7%
2	<a href="#">Agree</a>	57	27%
3	<a href="#">Neither Agree nor Disagree</a>	75	35%
4	<a href="#">Disagree</a>	55	26%
5	<a href="#">Strongly Disagree</a>	14	7%
	Total	215	100%

Figure 11 Responses to Question 11

Figure 11 asks whether the respondents have more contact with instructors in a blended classroom. Of the 215 respondents, 75 respondents (35%) do not have a preference. Also, 57 respondents (27%) agree with the statement, and 14 respondents (7%) strongly agree. Finally, 55 respondents (26%) disagree with the statement, and 14 respondents (7%) strongly disagree.

**12.** I learn more efficiently in a blended classroom.



Statistic	Value
Min Value	1
Max Value	5
Total Responses	213

Figure 12 Responses to Question 12

Figure 12 asks whether the respondents learn more efficiently in a blended classroom. Of the 213 respondents, 92 respondents (43%) are ambivalent about this statement. Also, 62 respondents (29%) agree with the statement, and 12 respondents (6%) strongly agree. Finally, 46 respondents (22%) disagree with the statement, and 9 respondents (4%) strongly disagree.

## Statistical Analysis

In terms of the second two research questions, the following analysis reflects whether the attitudes of students who have taken writing courses in a blended environment differ from the attitudes of students who have only taken traditional writing courses. The null hypothesis for this question is that the attitudes of students who have taken writing courses in a blended environment do not differ from the attitudes of students who have only taken traditional writing courses. Also, the analysis reflects whether students who have taken blended writing courses have more favorable attitudes toward blended and online learning than students who have not taken writing courses in blended environments. The null hypothesis for this question is that students who have taken blended writing courses do not have more favorable attitudes toward blended and online learning environments than students who have not taken writing courses in blended environments.

The survey data were entered into SPSS and recoded appropriately. Then, independent sample t-tests were run in order to measure any differences in student attitudes (the dependent variables) caused by delivery method or class type. The independent variable was whether or not the respondents had experienced blended and online learning environments.

Table 3 Descriptive statistics: I prefer writing in a blended classroom environment than in a traditional classroom environment

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q1: writing preference	Yes	134	2.37	1.030	.089
	No	81	3.19	1.074	.119

Table 3 shows descriptive statistics for the question regarding writing preference in a blended classroom or in a traditional classroom (Q1). For the blended group (n=134), the mean was 2.37 with a standard error of 0.089. The traditional group (n=81) had a mean score of 3.19 with a standard error of 0.119. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before were more likely to prefer writing in a blended classroom environment than those who had not taken blended classes.

Table 4 Independent samples test: I prefer writing in a blended classroom environment than in a traditional classroom environment

<b>Independent Samples Test</b>			
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.169	
	Sig.	.682	
t-test for Equality of Means	t	-5.564	-5.507
	df	213	163.349
	Sig. (2-tailed)	.000	.000
	Mean Difference	-.820	-.820
	Std. Error Difference	.147	.149
	95% Confidence Interval of the Difference	Lower Upper	-1.110 -.529

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q1 (the student's recorded writing preference). As shown in Table 4, Levene's test for homogeneity of variance (significance level 0.682) reveals that there is

homogeneity of variance. The t value (-5.564) for the mean difference (-0.820) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have taken a blended class before prefer writing in a blended classroom environment significantly more than those students who have not taken a blended class before.

Table 5 Descriptive statistics: I participate less in a blended classroom environment than in a traditional classroom environment

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q2: participation	Yes	134	3.06	1.009	.087
	No	81	2.70	1.101	.122

Table 5 shows descriptive statistics for the question regarding participation in a blended classroom (Q2). For the blended group (n=134), the mean was 3.06 with a standard error of 0.087. The traditional group (n=81) had a mean score of 2.70 with a standard error of 0.122. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have not taken blended classes before were more likely to believe they participate less in a blended classroom environment than those who had taken blended classes before.

Table 6 Independent samples test: I participate less in a blended classroom environment than in a traditional classroom environment

Independent Samples Test			
		Q2: participation	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	2.691	
	Sig.	.102	
	t	2.421	2.370
	df	213	157.552
	Sig. (2-tailed)	.016	.019
t-test for Equality of Means	Mean Difference	.356	.356
	Std. Error Difference	.147	.150
	95% Confidence Interval of the Difference		
	Lower	.066	.059
	Upper	.646	.653

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q2 (the student’s recorded participation). As shown in Table 6, Levene’s test for homogeneity of variance (significance level 0.102) reveals that there is homogeneity of variance. The t value (2.421) for the mean difference (0.356) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have not taken a blended class before believe that they participate significantly less in a blended classroom environment than those students who have taken a blended class before.

Table 7 Descriptive statistics: Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q3: frustrating	Yes	134	3.40	1.026	.089
	No	81	2.86	1.069	.119

Table 7 shows descriptive statistics for the question regarding whether writing in a blended classroom is mostly more frustrating than writing in a traditional classroom (Q3). For the blended group (n=134), the mean was 3.40 with a standard error of 1.026. The traditional group (n=81) had a mean score of 2.86 with a standard error of 0.089. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have not taken blended classes before were more likely to find writing more frustrating in a blended classroom environment than those who had taken blended classes before.

Table 8 Independent samples test: Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom

Independent Samples Test			Q3: frustrating	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.062	
	Sig.		.804	
	t		3.621	3.584
	df		213	163.373
t-test for Equality of Means	Sig. (2-tailed)		.000	.000
	Mean Difference		.531	.531
	Std. Error Difference		.147	.148
	95% Confidence Interval of the Difference	Lower	.242	.239
		Upper	.821	.824

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q3 (the student’s recorded feelings of frustration). As shown in Table 8, Levene’s test for homogeneity of variance (significance level 0.804) reveals that there is homogeneity of variance. The t value (3.621) for the mean difference (0.531) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have not taken a blended class before were more likely to find writing more frustrating in a blended classroom environment than those students who have taken a blended class before.

Table 9 Descriptive statistics: I find traditional classrooms more convenient for writing than blended classrooms

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q4: convenient	Yes	134	3.10	1.021	.088
	No	81	2.48	1.074	.119

Table 9 shows descriptive statistics for the question regarding the convenience of a traditional classroom (Q4). For the blended group (n=134), the mean was 3.10 with a standard error of 1.021. The traditional group (n=81) had a mean score of 2.48 with a standard error of 0.119. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have not taken blended classes before were more likely to regard a traditional classroom environment as more convenient than those who had taken blended classes before.

Table 10 Independent samples test: I find traditional classrooms more convenient for writing than blended classrooms

				Q4: convenient	
				Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.714		
	Sig.		.399		
t-test for Equality of Means	t		4.253		4.200
	df		213		162.159
	Sig. (2-tailed)		.000		.000
	Mean Difference		.623		.623
	Std. Error Difference		.146		.148
95% Confidence Interval of the Difference	Lower		.334		.330
	Upper		.912		.916

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q4 (the student’s recorded perception of convenience). As shown in Table 10, Levene’s test for homogeneity of variance (significance level 0.399) reveals that there is homogeneity of variance. The t value (4.253) for the mean difference (0.623) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have not taken a blended class before perceive a traditional classroom environment to be significantly more convenient than those students who have taken a blended class before.

Table 11 Descriptive statistics: I can communicate my thoughts better in a traditional classroom than in a blended classroom

	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q5: communicate	Yes	133	2.99	1.011	.088
	No	81	2.41	1.010	.112

Table 11 shows descriptive statistics for the question regarding communication in a traditional classroom (Q5). For the blended group (n=133), the mean was 2.99 with a standard error of 1.011. The traditional group (n=81) had a mean score of 2.41 with a standard error of 1.010. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before reported they were less likely to communicate their thoughts better in a traditional classroom environment than those who had not taken blended classes before.

Table 12 Independent samples test: I can communicate my thoughts better in a traditional classroom than in a blended classroom

		Q5: communicate	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	.098	
	Sig.	.754	
t-test for Equality of Means	t	4.107	4.109
	df	212	169.311
	Sig. (2-tailed)	.000	.000
	Mean Difference	.585	.585
	Std. Error Difference	.142	.142
	95% Confidence Interval of the Difference	Lower	.304
	Upper	.866	.866

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q5 (the student’s recorded level of communication). As shown in Table 12, Levene’s test for homogeneity of variance (significance level 0.754) reveals that there is homogeneity of variance. The t value (4.107) for the mean difference (.585) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have taken a blended class before were less likely to believe that they communicate their thoughts better in a traditional classroom environment than those students who have not taken a blended class before.

Table 13 Descriptive statistics: I often feel uncomfortable in computer-based discussions

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q6: uncomfortable	Yes	134	3.40	1.070	.092
	No	81	3.15	1.184	.132

Table 13 shows descriptive statistics for the question regarding level of comfort in computer-based discussions (Q6). For the blended group (n=134), the mean was 3.40 with a standard error of 1.070. The traditional group (n=81) had a mean score of 3.15 with a standard error of 1.184. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before were more likely to feel comfortable in computer-based discussions than those who have not taken blended classes before.

Table 14 Independent samples test: I often feel uncomfortable in computer-based discussions

				Q6: uncomfortable		
				Equal variances assumed	Equal variances not assumed	
Levene's Test for Equality of Variances	F		.111			
	Sig.		.740			
	t		1.625		1.585	
	df		213		155.611	
t-test for Equality of Means	Sig. (2-tailed)		.106		.115	
	Mean Difference		.255		.255	
	Std. Error Difference		.157		.161	
	95% Confidence Interval of the Difference	Lower		-.054		-.063
		Upper		.564		.572

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q6 (the student’s feelings of comfort in computer-based discussions). As shown in Table 14, Levene’s test for homogeneity of variance (significance level 0.740) reveals that there is homogeneity of variance. The t value (1.625) for the mean difference (.255) does not show a significant difference,  $p < .05$  between the two groups. Therefore, the results do not show a significant difference between the opinions of the blended students and the traditional students regarding their levels of discomfort in computer-based discussions.

Table 15 Descriptive statistics: I often feel anxious in a traditional classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q7: anxious	Yes	134	3.04	.961	.083
	No	81	3.43	.935	.104

Table 15 shows descriptive statistics for the question regarding feelings of anxiety in a traditional classroom (Q7). For the blended group (n=134), the mean was 3.04 with a standard error of .083. The traditional group (n=81) had a mean score of 3.43 with a standard error of .104. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before were more likely to experience feelings of anxiety in a traditional classroom than those who had not taken blended classes before.

Table 16 Independent samples test: I often feel anxious in a traditional classroom

Independent Samples Test				
		Q7: anxious		
		Equal variances assumed	Equal variances not assumed	
Levene's Test for Equality of Variances	F	.016		
	Sig.	.900		
	t	-2.949	-2.970	
	df	213	172.536	
t-test for Equality of Means	Sig. (2-tailed)	.004	.003	
	Mean Difference	-.395	-.395	
	Std. Error Difference	.134	.133	
	95% Confidence Interval of the Difference	Lower	-.659	-.657
		Upper	-.131	-.132

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q7 (the student’s feelings of anxiety in a traditional classroom). As shown in Table 16, Levene’s test for homogeneity of variance (significance level 0.900) reveals that there is homogeneity of variance. The t value (-2.949) for the mean difference (-.395) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have taken a blended class before were more likely to experience feelings of anxiety in a traditional classroom than those students who have not taken a blended class before.

Table 17 Descriptive statistics: Working with others is usually more productive in a traditional classroom than in a blended classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q8: Working with others	Yes	134	2.60	1.026	.089
	No	81	2.21	1.033	.115

Table 17 shows descriptive statistics for the question regarding whether working with others was more productive in a traditional classroom than in a blended classroom (Q8). For the blended group (n=134), the mean was 2.60 with a standard error of 1.026. The traditional group (n=81) had a mean score of 2.21 with a standard error of 1.033. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before were less likely to consider working with others to be more productive in a traditional classroom than in a blended classroom, compared to those who had not taken blended classes.

Table 18 Independent samples test: Working with others is usually more productive in a traditional classroom than in a blended classroom

<b>Independent Samples Test</b>			
		Q8: Working with others	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	2.186	
	Sig.	.141	
t-test for Equality of Means	t	2.725	2.720
	df	213	167.902
	Sig. (2-tailed)	.007	.007
	Mean Difference	.395	.395
	Std. Error Difference	.145	.145
	95% Confidence Interval of the Difference	Lower Upper	.109 .680

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q8 (whether working with others was more productive in a traditional classroom than in a blended classroom). As shown in Table 18, Levene’s test for homogeneity of variance (significance level 2.186) reveals that there is homogeneity of variance. The t value (2.725) for the mean difference (.395) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have not taken a blended class before were more likely to consider working with others to be more productive in a traditional classroom than in a blended classroom, compared to those who had taken blended classes before.

Table 19 Descriptive statistics: I feel like I learn less material in a blended classroom than in a traditional classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q9: learn less	Yes	133	3.17	1.001	.087
	No	81	2.62	1.056	.117

Table 19 shows descriptive statistics for the question regarding whether students felt that they learned less material in a blended classroom than in a traditional classroom (Q9). For the blended group (n=133), the mean was 3.17 with a standard error of 1.001. The traditional group (n=81) had a mean score of 2.62 with a standard error of 1.056. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have not taken blended classes before were more likely to feel that they learned less material in a blended classroom than in a traditional classroom, compared to those who had taken blended classes before.

Table 20 Independent samples test: I feel like I learn less material in a blended classroom than in a traditional classroom

			Independent Samples Test	
			Q9: learn less	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.764	
	Sig.		.383	
t-test for Equality of Means	t		3.805	3.756
	df		212	162.197
	Sig. (2-tailed)		.000	.000
	Mean Difference		.548	.548
	Std. Error Difference		.144	.146
	95% Confidence Interval of the Difference	Lower Upper		.264 .832

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q9 (whether students felt that they learned less material in a blended classroom than in a traditional classroom). As shown in Table 20, Levene’s test for homogeneity of variance (significance level .383) reveals that there is homogeneity of variance. The t value (3.805) for the mean difference (.548) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students who have not taken a blended class before were more likely to feel that they learned less material in a blended classroom than in a traditional classroom, compared to those who had taken blended classes before.

Table 21 Descriptive statistics: It is usually more challenging to complete writing assignments in a blended classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q10: more challenging	Yes	134	3.36	1.029	.089
	No	81	2.95	1.036	.115

Table 21 shows descriptive statistics for the question regarding whether students felt that it is usually more challenging to complete writing assignments in a blended classroom than in a traditional classroom (Q10). For the blended group (n=134), the mean was 3.36 with a standard error of 1.029. The traditional group (n=81) had a mean score of 2.95 with a standard error of 1.036. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have not taken blended classes before were more likely to feel that it is usually

more challenging to complete writing assignments in a blended classroom than in a traditional classroom, compared to those who had taken blended classes before.

Table 22 Independent samples test: It is usually more challenging to complete writing assignments in a blended classroom

				Q10: more challenging	
				Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.235		
	Sig.		.629		
t-test for Equality of Means	t		2.808		2.803
	df		213		167.978
	Sig. (2-tailed)		.005		.006
	Mean Difference		.408		.408
	Std. Error Difference		.145		.145
	95% Confidence Interval of the Difference	Lower		.121	
	Upper		.694		.695

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q10 (whether students felt that it is usually more challenging to complete writing assignments in a blended classroom than in a traditional classroom). As shown in Table 22, Levene’s test for homogeneity of variance (significance level .629) reveals that there is homogeneity of variance. The t value (2.808) for the mean difference (.408) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students that have not taken blended classes before were more likely to feel that it is usually more

challenging to complete writing assignments in a blended classroom than in a traditional classroom, compared to those who had taken blended classes before.

Table 23 Descriptive statistics: I have more contact with instructors in a blended classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q11: more contact	Yes	134	2.73	.967	.084
	No	81	3.42	.973	.108

Table 23 shows descriptive statistics for the question regarding whether students felt that they have more contact with instructors in a blended classroom (Q11). For the blended group (n=134), the mean was 2.73 with a standard error of .084. The traditional group (n=81) had a mean score of 3.42 with a standard error of .108. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before felt that they had more contact with instructors in a blended classroom than in a traditional classroom, compared to those who had not taken blended classes before.

Table 24 Independent samples test: I have more contact with instructors in a blended classroom

Independent Samples Test				Q11: more contact	
				Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F			.063	
	Sig.			.802	
	t			-5.047	-5.039
	df			213	168.007
t-test for Equality of Means	Sig. (2-tailed)			.000	.000
	Mean Difference			-.688	-.688
	Std. Error Difference			.136	.137
	95% Confidence Interval of the Difference	Lower		-.957	-.958
		Upper		-.420	-.419

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q11 (whether students felt that they have more contact with instructors in a blended classroom). As shown in Table 24, Levene’s test for homogeneity of variance (significance level .802) reveals that there is homogeneity of variance. The t value (-5.047) for the mean difference (-.688) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students that have taken blended classes before felt that they had more contact with instructors in a blended classroom than in a traditional classroom, compared to those who had not taken blended classes before.

Table 25 Descriptive statistics: I learn more efficiently in a blended classroom

Group Statistics					
	Blended: yes/no	N	Mean	Std. Deviation	Std. Error Mean
Q12: more efficiently	Yes	134	2.64	.862	.074
	No	81	3.32	.920	.102

Table 25 shows descriptive statistics for the question regarding whether students felt that they learn more efficiently in a blended classroom (Q12). For the blended group (n=134), the mean was 2.64 with a standard error of .074. The traditional group (n=81) had a mean score of 3.32 with a standard error of .102. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, students that have taken blended classes before felt that they learn more efficiently in a blended classroom than in a traditional classroom, compared to those who had not taken blended classes before.

Table 26 Independent samples test: I learn more efficiently in a blended classroom

				Q12: more efficiently	
				Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		.276		
	Sig.		.600		
t-test for Equality of Means	t		-5.459		-5.372
	df		213		160.327
	Sig. (2-tailed)		.000		.000
	Mean Difference		-.679		-.679
	Std. Error Difference		.124		.126
95% Confidence Interval of the Difference	Lower		-.924		-.929
	Upper		-.434		-.430

In order to determine if there was a significant difference between these two means, an independent samples t-test was run using the Blended – yes or no option as the grouping variable to indicate whether or not the student has taken a blended course (the independent variable). The dependent variable was Q12 (whether students felt that they learn more efficiently in a blended classroom). As shown in Table 26, Levene’s test for homogeneity of variance (significance level .600) reveals that there is homogeneity of variance. The t value (-5.459) for the mean difference (-.679) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that students that have taken blended classes before felt that they learn more efficiently in a blended classroom than in a traditional classroom, compared to those who had not taken blended classes before.

Table 27 Chi-square test: males versus females

		Blended experience		Total	
		Yes	No		
Are you?	Male	Count	55	25	80
		Expected Count	49.9	30.1	80.0
	Female	Count	79	56	135
		Expected Count	84.1	50.9	135.0
Total		Count	134	81	215
		Expected Count	134.0	81.0	215.0

Next, a simple cross-tabulation (chi-square) was performed to count the number of males versus females by group. This was done to ensure that there was not a difference between genders for the blended group versus the traditional group. This chi-square test showed no significant difference,  $p > .05$ , as demonstrated by Table 28.

Table 28 Chi-square significance

Chi-Square Tests						
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.239 <sup>a</sup>	1	.135	.147	.088	
Continuity Correction <sup>b</sup>	1.825	1	.177			
Likelihood Ratio	2.267	1	.132	.147	.088	
Fisher's Exact Test				.147	.088	
Linear-by-Linear Association	2.229 <sup>c</sup>	1	.135	.147	.088	.038
N of Valid Cases	215					

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 30.14.

b. Computed only for a 2x2 table

c. The standardized statistic is 1.493.

Finally, a series of t-tests were performed to measure male versus female attitudes to each of the survey questions. The results were not significant for any of the questions, except one. For the question regarding whether writing in a blended classroom is mostly more frustrating than writing in a traditional classroom (Q3), the results were significant.

Table 29 Descriptive statistics (male and female attitudes): Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom

Group Statistics					
	Are you?	N	Mean	Std. Deviation	Std. Error Mean
Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom.	Male	80	3.40	.976	.109
	Female	135	3.07	1.111	.096

As shown in Table 29, for males (n=80), the mean was 3.40 with a standard error of .109. Females (n=135) had a mean score of 3.07 with a standard error of 0.096. Since this question was coded with 1 for strongly agree and 5 for strongly disagree, females were more likely to find writing more frustrating in a blended classroom environment than males were.

Table 30 Independent samples test (male and female attitudes): Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom

<b>Independent Samples Test</b>			
		Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom.	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	1.327	
	Sig.	.251	
	t	2.174	2.247
	df	213	183.206
	Sig. (2-tailed)	.031	.026
t-test for Equality of Means	Mean Difference	.326	.326
	Std. Error Difference	.150	.145
	95% Confidence Interval of the Difference		
	Lower	.030	.040
	Upper	.621	.612

In order to determine if there was a significant difference between these two means, an independent samples t-test was run. The dependent variable was Q3 (whether students report that writing in a blended classroom is mostly more frustrating than writing in a traditional classroom). As shown in Table 30, Levene's test for homogeneity of variance (significance level .251) reveals that there is homogeneity of variance. The t value (2.174) for the mean difference (.326) shows a significant difference,  $p < .05$  between the two groups. Therefore, the results show that females were more likely to find writing more frustrating in a blended classroom environment than males were.

### **Qualitative analysis: advantages**

In terms of the qualitative data, this section will address the first of the three open-ended questions: "In terms of your writing development, what are or would be some major advantages of working in a blended classroom environment?" In general, the comments that were obtained from the students in a blended classroom environment differed extensively from those students in a traditional classroom environment. Below are a few of the comments from students that were familiar with a blended classroom environment. Some of the comments have been edited to ensure grammatical correctness:

In a blended environment I can tell my writing mistakes better than when I am in a traditional classroom. I have learned how to expand my writing knowledge. Having been in a blended environment I feel better about my writing assignments in all my classes.

This student states that he/she has been in a blended environment and is more comfortable with that type of environment because it provides a way to discover mistakes faster and to "expand writing knowledge".

While working in a blended environment for an English class, writing assignments can be done in a much more efficient and fast way. No doubt, typing a paper is much quicker than writing by hand. Another advantage is note-taking. In traditional classes, I have trouble of not writing all the information down. But when I type, I can look at the lectures and type at the same time, making it much faster.

Similarly, this student compares the process of taking notes in a blended environment and in a traditional environment, and states that it is easier to take notes by typing on a computer in a blended environment.

In a traditional class, the teacher cannot just focus on students individually because they have to teach something to numerous students and hopefully they get it. With a blended environment, you are more so told to do something not taught it.

This student focuses on how he or she believes that individuals are addressed more personally in a blended classroom. The student expresses more feelings of empowerment and responsibility and in a blended environment.

I think I am more apt to participate in online discussions in a blended environment because in a traditional classroom setting I get more anxious and do not want to participate as much among my peers.

Again, this student compares the difference between a blended environment and a traditional one, and confirms feeling more anxious and less participatory in a traditional classroom setting. This finding relates to many of the results obtained during the statistical analysis.

Working in a blended environment is beneficial to students because it helps the problem of not having a computer in class and it helps when we do activities such as peer review. In the classes I have taken that are blended, it has been easier for me to ask questions when I will always have my document in front of me. Sometimes in college courses questions about sources or anything along those lines are hard to answer via email. With a blended environment, it is easier to get involved with your professor and classmates as it relates to your assignment and any questions that may come up while working on that assignment. I have also noticed that the majority of blended classrooms have been smaller in size, which helps to have a more intimate setting with that particular subject.

In this response, the student states that he/she has had experience in a blended environment and discusses the ease with which things like peer review can be performed. While the comment about smaller class size is somewhat debatable, the student argues that a blended environment is more intimate.

In a blended classroom I feel that it is easier to keep track of your work. Every discussion is documented and saved in one place online and we do not have to worry about losing our work. It is a great place to interact with the whole class and get feedback from your peers. We can read each other's work and comment on how we think they can improve on their writing.

Again, this student discusses the benefits of a blended environment in terms of convenience and in terms of having work easily accessible and available. This comment also relates quite well to the earlier one about peer review, as well as to the findings obtained in the statistical analysis.

For me, I like the blended classroom as opposed to a traditional one. The blended classroom gives me a chance to work at my own pace and in my opinion more efficiently. I really like to work at my own pace and the blended classroom setting gives me the perfect opportunity to do so.

Finally, this student states that he/she prefers a blended environment because of the ability to work at his/her own pace. Here are some further comments from other students that were unfamiliar with blended classroom environments:

Having access to computers, online material and resources needed in writing would be an advantage of working in a blended environment.

You can get advice from other peers, but for me, I find that I do my best work in a traditional classroom. Technology is very advanced but not always trustworthy. I really don't even like turning things in through the computer because I am never 100% certain that it actually got turned in.

### **Qualitative analysis: disadvantages**

In terms of the qualitative data, this section will address the second of the three open-ended questions: “In terms of your writing development, what are or would be some major disadvantages of working in a blended classroom environment?”

While several of the respondents could not identify any disadvantages of blended classrooms at all, there were some themes that arose in a large number of the responses to this question. Some of these themes were that blended classrooms offer too many distractions, there is often less peer interaction, it is harder to communicate with professors, time management, and the idea that the technology does not always work properly (which might be due to students or teachers that are not as familiar with computer technology as others may be). Below are a few selected responses that highlight these general themes in greater detail:

I think that some of the disadvantages of a blended environment would be that there isn't as much one on one with the students. Through this course, I can say that I really did not form any relationships with anyone in this class because the majority of the time we just did our informal writings. I did talk to other peers in my class, but never really bonded with them like I would have in a traditional class.

The only disadvantage of working in a blended environment is that you get less face to face interaction than you would in a traditional environment. The best form of communication is face to face because you can get your point across a lot easier than if simply messaging one another over a computer system. You get the same amount of overall interaction in a blended environment, but it is sometimes harder to get your point across.

I work well face to face with students and professors. When taking an online course, this interaction is drastically reduced, and my performance is generally hindered because I do not get my needed brainstorming time with professors who, with online class, I only communicate via e-mailing.

Many of these students express the idea that a blended environment involves less interaction with peers and professors. Since one of the major goals of blended environments is to have more interaction and more personalized attention, it might be necessary to change student perceptions and educate them as to some of the specific goals of blended environments in the future. The following comments relate to the idea of there being more distractions in a blended classroom environment.

Some disadvantages would be distractions. It is possible to get on Facebook or other (sites) to not listen to the instructor. There is also less communication (with) other individuals so the class unity is weaker. If someone is technologically challenged then this environment could be difficult for him or her.

Some major disadvantages of working in a blended environment include adjusting to the technology. If you are not accustomed to working with certain systems then it becomes difficult to learn as quickly as is necessary. I get lost and confused sometimes when a class is heavy on the computer.

Teenagers get distracted by social media a lot and would probably be on social media a lot during a blended environment.

The major disadvantage would be the students would not pay attention as much as they would in a class without computers.

Time management can be difficult. It is easier to do work and easier to understand the material with a teacher and peers present.

## **Corpus Analysis**

Finally, a simple corpus analysis was performed on the student responses to the question "Do you think you would be interested in taking any future writing courses entirely online?" Perhaps the most concise description of a corpus is "a collection of texts, written or spoken, which is stored on a computer" (O'Keeffe, et al., 2007, p. 1). Although this definition is a good starting point, Aston (1997, p. 205) elaborates by calling corpora "computer-readable collection(s) of texts or transcripts which can be accessed and interrogated selectively using text-retrieval or concordancing software". These corpora can be used to highlight lexicogrammatical features of written and spoken language. In this study, the student responses were entered into the WordCounter software to generate "word lists". As stated on the WordCounter website, it "ranks the most frequently used words in any given body of text" (Morgan Friedman, 2004, para. 1). These word lists, therefore, represent the main ideas contained in the corpora. From the student data, the words "take", "online", "learning", "writing", "courses" and "classes" were

removed, simply because including them in the results would have produced redundant information. These data were then subjected to both quantitative and qualitative analysis (Fitzpatrick, Sanders, & Worthen, 2004) in which the prevalence of certain words was examined and the number of occurrences of those specific words was measured and counted (quantitative analysis). Also, the data were analyzed in terms of the amount of meaningful information provided (qualitative analysis). After performing all of the above procedures, the final frequency list appears below as Table 31.

Table 31 Frequency of words used in response to taking future writing courses online

<b>Word</b>	<b>Frequency</b>
think	64
interested	41
room	38
teacher	35
yes	33
feel	33
work	31
entirely	29
able	27
one	26
students	24
better	24
need	24
time	21
get	21
traditional	20
professor	20
being	19
having	19
face	18
learn	18
help	18
prefer	17
future	16
assignments	16

The above results show some support for the idea of taking future writing classes online. The word "yes" appears as one of the highest-frequency words in the body of text, which might indicate a positive attitude toward taking online writing classes. Also, the word "prefer" would probably act in a similar way. However, words like "face" and "one" seem to denote the need for more face-to-face and one-on-one interaction, which are elements the respondents perceive to be missing from online writing environments. Finally, the words "help" and "learn" seem to be some other concerns of working in an online environment. The remaining words in Table 9 do not appear to be particularly helpful in the context of the question. The results of the corpus analysis will be examined in greater detail in Chapter V.

## CHAPTER V

### CONCLUSIONS

This study has presented a mixed methods investigation of student attitudes toward blended and online classroom environments. The respondents were two groups of university freshmen writing students. As was explained in Chapter IV, a wide range of divergent and revealing results was obtained with the survey and open-ended questions that were presented to the respondents.

#### **Purpose Statement**

The purpose of this study was to compare introductory writing student attitudes toward blended and online courses. The mixed methods study offered a survey to two groups of students: those in blended classroom environments (with individual computers) and those in traditional classrooms (without individual computers). The results of this survey might be used to recommend some steps universities and other institutions can take to incorporate more blended and online courses in the future.

#### **Research Question 1**

What are some of the general prevailing student attitudes toward blended classroom environments and online classroom environments?

## **Research Question 2**

If students take writing courses in a blended environment, will their attitudes toward blended and online education differ from the attitudes of students who only take traditional writing courses?

## **Research Question 3**

Will students who take blended writing courses have more favorable attitudes toward blended and online learning than students who do not take writing courses in blended classroom environments?

## **General Discussion**

Overall, the attitudes expressed by the students in this research suggest that there are some major differences between student groups in terms of their general attitudes to blended and online learning. The findings of this study support contemporary research into some of the established best practices in the field of using computers to teach writing (Sidler, Overman Smith & Morris, 2007) and previous discussions of the differences between students in traditional and blended environments (Badertscher, 2011; Dutton, Dutton & Perry, 2002; Gaziano & Liesen, 2004). In terms of the student attitudes to all of the questions, a fairly common theme surfaced, which supported the idea that "it is more beneficial to interact with other actors in the learning process than to search for information individually" (Castaño-Muñoz et al, 2013, p. 9). Whether students had prior experience in a blended classroom environment or not, they reported placing a very high value on the level of interaction with their peers and with their instructors, and they

sometimes feared that blended and online environments might not lend themselves to as much interaction.

Specifically, what can be concluded from the statistical tests was that students in the blended group prefer writing in a blended classroom environment significantly more than students in the traditional group. This might be due to the possibility that they feel more comfortable expressing themselves directly on the computers, even though they sometimes fear that the machines or software might not work correctly.

Students in the blended group believe that they participate significantly less in a blended classroom environment than students in the traditional group. While blended classrooms are ideally supposed to encourage more participation, the general student attitude is that this is not the case.

Students in the blended group were less likely to find writing more frustrating in a blended classroom environment than students in the traditional group. Again, this might be due to the idea that they feel more comfortable expressing themselves directly on the computers in real-time.

Students in the blended group perceive a blended classroom environment to be significantly more convenient than students in the traditional group. The availability of computers and easy access at all times to course materials might have been a contributing factor in terms of this attitude.

Students in the blended group believe that they were less likely to communicate their thoughts better in a traditional classroom environment than students in the traditional group. Perhaps students in blended classrooms get used to the kind of communication that is often present in a blended environment (such as a discussion board format), and this may lead them to

believe that they can communicate their thoughts better this way rather than by traditional face-to-face communication.

Students in the blended group were more likely to feel comfortable in computer-based discussions than students in the traditional group. This is understandable since they use the computers on a regular basis and would likely have some experience taking part in computer-based discussions. However, the results were not significant in this case, perhaps because many modern students have grown up with computer-based discussions and thus they generally feel quite comfortable in those discussions.

Students in the blended group were more likely to experience feelings of anxiety in a traditional classroom than students in the traditional group. This is an interesting finding because it suggests that while feelings of anxiety might be reduced in a blended classroom, some students that are used to being in a blended environment might feel anxious in a traditional classroom.

Students in the blended group were less likely to consider working with others to be more productive in a traditional classroom than in a blended classroom, compared to students in the traditional group. Again, blended classrooms are ideally supposed to encourage small group work, and the blended group seems to consider these classrooms suitable environments for working with their peers.

Students in the blended group were less likely to feel that they learned less material in a blended classroom than in a traditional classroom, compared to students in the traditional group. This negates some prior findings, which suggested that working in blended classroom environments is less rigorous and is somehow “easier” than working in traditional classroom

environments (Parthasarathy & Smith, 2009). In fact, the current findings suggest that blended classrooms can facilitate more learning than traditional environments.

Students in the blended group were less likely to feel that it is usually more challenging to complete writing assignments in a blended classroom than in a traditional classroom, compared to students in the traditional group. Again, this is understandable since they use the computers on a regular basis to complete their assignments.

Students in the blended group felt that they had more contact with instructors in a blended classroom than in a traditional classroom, compared to students in the traditional group. Blended classrooms are supposed to encourage more contact with instructors, and the general student attitude after being in blended classrooms confirms this idea.

Finally, students in the blended group felt that learning was more efficient in a blended classroom than in a traditional classroom, compared to students in the traditional group. Again, the availability of computers and easy access at all times to course materials might have been a contributing factor in terms of this attitude. There was a large difference in opinion for this question, with students in the blended group showing a vast preference for a blended classroom when they were thinking about their level of efficiency.

### **Further reflection**

As shown in Appendix C, there are several themes that seem to emerge quite often when dealing with effective ways of engaging modern students. Some of these themes can be described as relevance, rationale, relaxed, rapport, and research-based methods (Price, 2009). In addition, it can be argued that the "number one characteristic Millennial respondents desired in a learning environment was that it be interactive and participatory" (Price, 2009, p. 5). Also, it

was noted that "Millennial students did not attack the lecture method altogether, but they had strongly negative perceptions of learning environments in which lecture was the only method used" (Price, 2009, p. 5). All of these themes have indeed emerged strongly in the current study and it seems that blended classrooms might be appropriate environments for instructors to address some of these themes effectively through the use of clicker software (Caldwell, 2007) and other technological tools.

The qualitative comments represent some advantages of blended environments, but the students from traditional environments did not always seem to see the full value of these advantages. Their responses were sometimes non-committal about blended courses, which is perhaps to be expected if they have little knowledge of these kinds of courses. It seems that only once students have actually taken one or more courses in a blended environment, do they realize the extent of the differences between the types of delivery mechanisms. Once they realize these differences, they are better able to decide whether they prefer blended or traditional learning environments.

While some of the qualitative responses were valid (especially because there seemed to be a lot of agreement among the respondents about the kinds of disadvantages they faced), there really was not that much new information other than the disadvantages that have already been identified several times before when working in blended and online environments (see Badertscher, 2011, as well as Chapter II for an exhaustive review of these disadvantages). Although there was not very much new knowledge gained from this question, it was helpful to see that the results obtained in this current study were often in line with previous research findings and also corroborated the results obtained in the statistical analysis.

The word frequencies and corpora discussed in Chapter IV certainly show some support

for the idea of taking future writing classes online. However, when the textual entries were analyzed on an individual basis, the answers were more nuanced and descriptive. For example, only a third of the respondents indicated conclusively that they would in fact be interested in taking future writing courses entirely online. In fact, the general consensus seemed to be that the students preferred having a teacher in the same room as them if they needed to ask any questions. For example, one student stated:

I wouldn't be interested in taking an online writing course. I do not do well in online classroom environments because there is no face-to-face interaction. The absence of this interaction makes it where students have less communication with each other and the teacher about their writing. For my writing to improve, I must have face-to-face consultations with my peers and teachers about my writing and what needs to be improved on it.

Many students also seemed afraid of the increased responsibilities they perceived to be involved in online courses. They seemed to be aware that they might procrastinate too much and end up not doing the required work, which could be considered a problem of their own making, but if online environments were to become more prevalent in the future, this is an issue that would have to be addressed on a departmental level in terms of student satisfaction and retention. The online education readiness assessment form shown in Appendix E could offer a model for immediate "diagnosis" of those students who would most likely be successful learners within an online environment. More detail will be provided about this form later in the chapter, but for the present analysis, it is important to note some examples of student comments that reflect their lack of self-confidence when it comes to operating in online environments:

No, I think that I would like it better in a classroom due to the fact that I could talk to people and my professor more often. Also, I would be lazy with an online class and not do my work most likely. I need someone to hold me accountable.

No, I would not be interested in taking a writing course entirely online because I'm an interactive student. Having assignments online would make me lazier and decrease my drive for learning.

Finally, there seemed to be much more of a positive perception of taking some kinds of classes online, but not others. While these perceptions may not necessarily be accurate or valid ones, several respondents wrote that they regarded writing courses as "easy" to take online, but they also wrote that other courses were perceived as being much more difficult in an online environment. For example:

I would love take some more classes entirely online. I am an engineering major, so taking an engineering class completely online would be very stressful. As far as an English class or business class, I think it would be very beneficial.

Yes, it is so much better, because you can go at your own pace. A writing class is perfect to take online because everything you can learn by writing more and more and you get feedback and you can edit it right away!

Possibly. It would depend on the class. If it were a class such as Economics or something that could easily be self taught then it would not be bad but a math class entirely online would probably not be as effective.

Given all of the material discussed in this study, it seems that "the increasing demand to incorporate new technologies in teaching challenges both faculty and entire institutional systems" (Salter, Richards, & Carey, 2004). Therefore, a few limitations of the research discussed in Chapter IV include a relatively limited number of evaluation participants, not controlling for the role of the instructor and the role of student motivation, and a possible discrepancy of technological skills on the part of the respondents (Badertscher, 2011). These limitations correspond with some of the limitations discussed in Chapter I. As expected, since not all of the participants were at the same level of technological proficiency, this certainly might

have affected their responses to the survey questions.

The above research seems to show considerable support for the idea that students with prior experience in blended classroom environments have more favorable attitudes toward these classes and also online classes than students who have never personally experienced these kinds of environments.

The ideal solution seems to be offering students an option of enrolling in an online course, a blended classroom or in a traditional one. Advisors need to be trained more specifically to present students with this option. While different delivery methods already are a reality on many university campuses and specifically at UTC (Carr, 2013; Jett, 2013), the results of the above research confirm the need to continue experimenting with blended classroom environments. Appendix D shows some possible ways of increasing the number of available blended classrooms, as proposed by UTC's computer classroom committee (L. Ingraham, personal communication, 28 October 2011). While this list certainly supplements some the findings of this research, and acts as an important source of information, there do seem to be some concerns.

First, during a time of budgetary constraints (Selingo, 2013), it may not be politically easy for universities to obtain the necessary funding to create new blended classrooms. Second, there is the risk of creating polarization, with some instructors being "computer-based" and others not using computers at all. At the moment, hybrid, blended and online courses are "rare, and teaching professors how to manage them is costly and time-consuming" (The trouble with online college, 2013, p. 1). As discussed in Chapter II, all of this would create very different classroom experiences for faculty members as well as students, and it might also have an impact when trying to satisfy the general education requirements for these classes. The perception of

computer classrooms as "creating a have vs. have-not classroom culture" (Badertscher, 2011, para. 6) needs to be addressed to a higher degree.

Some other limitations may include the considerable costs involved in equipping classrooms with computers, as well as a possible general lack of technological skills and an overall resistance to any form of online learning (by students as well as faculty members). Some faculty members seem to think that it is easier for students to plagiarize when they have computers in the classroom. It seems that the computers can often do a lot of the work for the student: for example, with the use of citation programs. In addition, many students and faculty members expressed concerns about the computers causing excessive distractions in blended classroom environments. While distractions may be a limitation of blended classroom environments, the lack of group cohesion and interaction in online environments means that some students feel uncomfortable since they "do not feel membership in any group" (Crawford & Rausch, 2012, p. 104). This factor might well be a cause for concern in many blended classroom environments too.

As a related aspect, most of the students who participated in this study seemed very invested in the idea of the humanistic element of education. Before learning more about blended and online classroom environments, many of them seemed already against the idea that these kinds of environments could ever replace the qualities that traditional, discussion-based classes bring to their educational experience in general. It is therefore not surprising that there was some opposition to the idea of blended and online classroom environments in general.

However, it is important to revisit the ideas discussed in Chapter II that incorporating technology into education is not really a new idea. Technology in education could be used to describe a wide range of situations, which could be perceived as starting with "school museums,

the visual and audiovisual instruction movements, (and) the use of media during World War II" to the current interest in instructional television, computers, and the Internet (Reiser & Dempsey, 2012). All of these trends seem to have built upon each other in incremental ways, so the state of educational technology today is a direct result of all of these collaborative efforts. The current status of these efforts has led researchers to the modern burgeoning interest in the idea of e-learning, which "encompasses all learning involving technology in any way whatsoever" (Reiser & Dempsey, 2012, p. 282). All of the conditions described in the current study are allowing educational technology in all of its forms to become a far greater part of the teaching environment than it used to be even five years ago. The old constraints of modality, geography, and time (Reiser & Dempsey, 2012, p. 282) are now being rendered obsolete by technology, since learning can now take place in an asynchronous environment that does not require the presence of any of the participants at any given or set time.

### **Recommendations for Further Study**

All of the above factors are ideas that will need to be considered when thinking about the ongoing implementation of blended classroom environments. It seems that the future of education might be relying increasingly on technology (Bady, 2013; Bruni, 2013; Carr, 2013; Cobos, 2011; Jett, 2013), and it is up to educators as well as administrators to design the optimal environments for this kind of computer-based learning to occur. While the blended group and the traditional group certainly differed significantly for a large number of the questions, the general trend for a lot of those questions was that of similar overall outlooks on education in general. This means that even students that have had no experience in blended classrooms might be open to trying these kinds of classrooms in the future.

One way that universities are starting to address the option of implementing more blended and online courses can be demonstrated by the use of online education readiness assessment tools such as the ones shown in Appendix E and Appendix F. These specific assessment tools cover a wide variety of factors that could be considered important for online learning. Appendix E is a "web-based tool used by thousands of potential online students" (Georgia, 2013, para. 1), and is currently being used in the state of Georgia, and Appendix F is a simpler version being used in Tennessee. However, even if students from all over the world were to take this kind of diagnostic test, it would give those students as well as their instructors an idea of their specific suitability to online courses. So, through the use of assessment tools like this, potential students can more scientifically determine whether they might be interested in signing up for an online course. After taking this kind of assessment, they will presumably have clearer ideas of what to expect once they are enrolled in the course.

Also, as discussed in Chapter II, the ongoing development of MOOCs might be a reasonable way for instructors to start incorporating more online features into traditional classroom environments. While MOOCs are currently in an early stage of development, it is possible that the models they are offering might indeed act as a sturdy framework for the future of education. Instructors could use MOOCs in their classrooms to provide students with access to the most reputable and prestigious professors and universities available on the planet. If instructors utilize MOOCs as accessories to their classroom pedagogies rather than as ways to replace those pedagogies, students could stand to receive multiple benefits. For example, instructors could incorporate MOOCs into a kind of cohort based learning model (Crawford & Rausch, 2012; Rausch & Crawford, 2012) through the use of discussion boards and other interactive elements to promote mutual intellectual and academic stimulation and establish

socially supportive relationships among the participants (Seifert and Mandzuk, 2006). This is in line with moving away from the "sage on the stage" model, making the classroom more interactive and "leverag(ing) the big data flowing from MOOCs" (Whitmer, 2013, para. 2) in order to broaden their appeal. For example, Whitmer also discusses "creating a MOOC for students in high school or elementary school" (Whitmer, 2013, para. 6), which would broaden potential audience numbers considerably.

When examined from the perspective of learning institutions in general, much of the current research seems to support the use of MOOCs and the Internet "as an interactive learning catalyst (and) an effective strategy to get the maximum benefit from the investment made in that technology" (Castaño-Muñoz et al, 2013, p. 9). However, when applied to higher education, there is an argument that:

two classes of universities will be created: one, well-funded colleges and universities in which privileged students get their own real professor; the other, financially stressed private and public universities in which students watch a bunch of videotaped lectures and interact, if indeed any interaction is available on their home campuses, with a professor that this model of education has turned into a glorified teaching assistant" (Kolowich, 2013, para. 6).

While there certainly is the potential for MOOCs to lead to these kinds of issues, it seems that if some of these kinds of early obstacles and resistance to blended and online learning environments can be addressed successfully, it might be possible to move ahead with the implementation of these environments fairly rapidly.

Except for the finding that females were more likely to find writing more frustrating in a blended classroom environment than males were, the influence of age and gender has not really been examined in the current study, so these areas should be explored in the future. According to earlier research, and supporting the finding described above, "male students tended to be more

satisfied with blended learning than their female counterparts" (Naaj, et al., 2012, p. 196).

However, most of the results of the current study did not support nor deny this earlier research, because the age and gender variables were too similar among the selected respondents. As for the idea of females finding writing to be more frustrating in a blended classroom than males do, further research should be done in the future to expand on this idea.

Therefore, in future work, the survey might be provided to a more diverse group and then several alternative tests might also be used to test for perceptions of frustration and other attitudes that might be influenced by student age and gender. A series of post hoc tests could be performed in those future studies, depending on the kinds of respondents that might be taking the survey. For example, a Tukey test might be performed together with ANOVA tests in order to compare multiple means.

Also, students in a computer classroom seem to already be more open to using computers for writing and they often have more favorable attitudes to online courses in general. There is a growing body of research (Behjat, Yamini, & Bagheri, 2011; Castaño-Muñoz et al, 2013; Gaziano & Liesen, 2004; Mangan, 2012; Movahedzadeh, 2011; Schaber, et al, 2010; Smart & Cappel, 2006) that suggests that prior experience in a blended classroom environment can positively affect student attitudes to both blended and online learning environments. In addition to the results obtained in the current study, this is an important factor that will need to be examined continually in increasing detail in future studies. Again, a broader and more diverse group of respondents might provide useful results.

## **Conclusions**

Although blended learning environments continue to grow in popularity among some students, they currently remain at a fairly early stage of development in terms of their relatively limited prevalence at institutions of higher learning. Perhaps due to the relatively limited experience of some of the students in this study, the results reported in Chapter IV seem to indicate that a large number of the respondents seem to regard both blended and online courses as somewhat neutral in terms of efficacy at this point in time. However, by providing more students with access to blended and online classroom environments, it seems possible to perhaps adjust their attitudes more favorably in the direction of accepting traditional, blended, and online environments as equally effective delivery methods and useful facilitators of their education in the future.

Over the past decade, there has been a drastic increase in the creation of technology-rich learning environments (Poitras, Lajoie, & Hong, 2011), in which educational content can be delivered and may be "facilitated by cell phones, iPods, phone systems, LMS systems, multimedia computing, or the Web" (Reiser & Dempsey, 2012, p. 282). Because of all these ongoing media-based developments or "diffusion of innovations" (Rogers, 2003), there certainly seems to be a clear victor in the intriguing Clark/Kozma debate (Clark, 1994; Kozma, 1994), as to whether media will ever influence learning or not. Clearly, Kozma, who states that media will influence learning, has already been proven right (at least on some levels), and this seems to be the irrevocable trend for the foreseeable future of education. Instructors now have an increasing array of teaching tools available for use in a distance-learning capacity or also as part of a modern, networked classroom environment.

However, this increased reliance on technology also means that several new roles and responsibilities have surfaced in the modern classroom. For example, instructors might now be expected to know how to use computers and the Internet in competent, responsible ways within the classroom environment. Blomeyer (2002) suggests that one of the most important roles of an online instructor is to encourage students to interact with the content and with their peers. It seems reasonable that all of these extra tools might offer the potential to make teaching easier and more engaging for students, but this is not necessarily the case for all classroom environments. Indeed, the use of technology in the classroom does introduce the need for the instructor to "adopt the roles of facilitator and coach... combined with moderator and tutor... as well as subject matter expert and technician" (Craig, Goold, Coldwell, & Mustard, 2008).

It is understandable that certain instructors in higher education might feel some resentment toward this increasing trend, as mentioned earlier (The Document, 2013). Some professors may feel usurped or threatened by blended or online delivery methods because they are more comfortable being the sage on the stage than being a guide on the side (King, 1993). However, as detailed in several articles (for example, Beers and Bowden, 2005; Walston, 2012b), the traditional "lecturing" style of teaching has not proven that useful when it comes to the amount of material the students are learning. Also, it seems that "the more delivery formats in which instruction is made available, the greater the likelihood that the broadest audience will be attracted" (Rothwell & Kazanas, 2008, p. 303). Therefore, resistance to using technology in the classroom does not seem to be a valid option for very much longer. There seems to be a real need due to budgetary concerns and student retention issues for more university courses to be adapted into both blended and online environments in which students are encouraged to actively engage with the course material and produce better results than they might produce in traditional

classrooms (see, for example, Lewin, 2013b). In a study performed at San Jose State, the integration of MOOCs into a traditional classroom environment led to dramatically improved results, with "91 percent of those in the blended section pass(ing), compared with 59 percent in the traditional class" (Lewin, 2013b, para. 12).

In many cases, it is true that blended and online learning environments can involve less specific direction from instructors or professors, so in these cases, students will need to take greater responsibility for their own learning (Cavanaugh, Barbour, Brown, et al., 2009; Shaer, Khabou, & Fuchs, 2009), and universities will also need to train their instructors and professors to become more comfortable with these kinds of environments.

It seems likely that even those instructors and professors that are resistant to using blended and online environments will increasingly be asked (or forced) by university administrators to use technology to a far greater degree. This is a looming paradigm shift that modern instructors, professors, and students would do well to realize and embrace while they still have some time. Further studies could address this need to prepare students to become more self-directed in their approach to their education, since "instruction is not so much done to learners as it is meant to engage learners in a process of inquiry and activity" (Reiser & Dempsey, 2012, p. 45). Modern students should certainly be encouraged to adopt an intensely "hands-on" approach to their studies, since it is after all in their own best interests to master the material as much as they possibly can.

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APPENDIX A  
ENGLISH 1010 OBJECTIVES AND OUTCOMES

**English 1010 Objectives:**

1. To practice and develop writing processes pertaining to invention, revision, organization, drafting through multiple drafts, editing, and adjusting for rhetorical context (purpose, audience, persona).
2. To discuss and share writing and reading with one another and develop a shared vocabulary for talking about writing.
3. To practice critical thinking processes such as abstracting, representing, incorporating, and synthesizing the ideas of others through writing.
4. To produce readable and interesting finished products that reflect appropriate academic textual conventions of presentation.

**English 1010 Outcomes:**

By the end of English 1010, each student who earns a C or better will have ...

1. Demonstrated and used invention strategies that help writers develop ideas, formulate a thesis, and adjust organization and details for the audience's needs.
2. Used revision to clarify and/or improve a writing project's purpose, thesis, organization, use of supporting details, use of source material, and audience awareness.
3. Worked effectively in peer groups to give and receive substantive feedback on emerging drafts.
4. Composed at least two formal writing projects that substantially and effectively synthesize and incorporate texts produced by others.
5. Used basic multisubject databases such as Academic OneFile to effectively incorporate relevant research into at least two formal assignments.
6. Cited all outside sources correctly and consistently using an accepted and current form of documentation such as MLA or APA style.
7. Used Edited American English in all formal projects. On rare occasions, features of other dialects may be used to serve particular rhetorical purposes.
8. Completed an acceptable draft of all formal writing projects. An "acceptable draft" is one that meets minimum assignment criteria to earn a grade of C or better.
9. Revised and edited at least four formal projects for a total of 3750-5000 words (approximately 15-20 double-spaced pages).

APPENDIX B  
CONSENT FORM AND SURVEY

## Instructions

### STUDENT ATTITUDES TOWARD BLENDED AND ONLINE COURSES: A COMPARISON OF STUDENTS IN TRADITIONAL CLASSROOM WRITING ENVIRONMENTS AND STUDENTS IN BLENDED WRITING ENVIRONMENTS

#### INTRODUCTION

You have been invited to participate in a research study that compares UTC introductory writing student attitudes toward traditional classroom writing environments and blended and online writing environments.

#### INFORMATION ABOUT YOUR INVOLVEMENT

This survey contains a list of multiple-choice questions, as well as three open-ended questions at the end. The entire survey should take you no longer than 15 minutes to complete.

#### RISKS

There are no foreseeable risks involved in this project.

#### BENEFITS

The benefits of this research include gaining more information about using computers to teach writing.

#### CONFIDENTIALITY

The information gathered will be kept confidential. Data will be stored securely and will be made available only to the person conducting the study. No reference will be made in oral or written reports to link you specifically to the study. The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #13-025.

#### CONTACT

If you have questions at any time about the study or the procedures, you may contact the researcher, Rowan Johnson, at 331 Lupton Library (423-425-5475), the IRB Chair Dr. Bart Weathington (instrb@utc.edu or 423-425-4289), or Dr. David Rausch (David-Rausch@utc.edu).

#### PARTICIPATION

Your participation in this study is voluntary; you may decline to participate at any time without penalty. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

Have you read the above and do you wish to participate with this study?

Yes

Are you?

Male

Female

Please enter your age range:

18-22

23 or older

A blended learning environment blends online and face-to-face delivery. Blended classrooms at UTC have computers for each student. Most content is delivered online, there are often online discussions, and most of the daily work is computer-based. Including the class you are in now, have you ever taken a college writing class in a blended learning environment? If not, please answer the questions based on your perception of a blended classroom.

- Yes
- No

**I prefer writing in a blended classroom environment than in a traditional classroom environment.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I participate less in a blended classroom than in a traditional classroom environment.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**Writing in a blended classroom is mostly more frustrating than writing in a traditional classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I find traditional classrooms more convenient for writing than blended classrooms.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I can communicate my thoughts better in a traditional classroom than in a blended classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I often feel uncomfortable in computer-based discussions.**

- Strongly agree

- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I often feel anxious in a traditional classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**Working with others is usually more productive in a traditional classroom than in a blended classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I feel like I learn less material in a blended classroom than in a traditional classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**It is usually more challenging to complete writing assignments in a blended classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I have more contact with instructors in a blended classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**I learn more efficiently in a blended classroom.**

- Strongly agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

**In terms of your writing development, what are or would be some major advantages of working in a blended environment (100 words)?**

**In terms of your writing development, what are or would be some major disadvantages of working in a blended environment (100 words)?**

**Do you think you would be interested in taking any future writing courses entirely online (100 words)?**

APPENDIX C  
FIVE "R"S FOR ENGAGING THE MILLENNIAL

**Relevance.** Millennials do not typically value information for information's sake. One of the greatest challenges of the professoriate will be to connect course content to the current culture, and make learning outcomes and activities relevant to Millennial learners and their future.

**Rationale.** Unlike Boomers who were raised in a more authoritarian manner in which they more readily accept the chain of command, Millennials were raised in a non-authoritarian manner and are more likely to conform, comply, and adhere to course policies when they are provided with a rationale.

**Relaxed.** Millennials thrive in a less formal, more comfortable learning environment in which they can informally interact with the professor and one another.

**Rapport.** Millennials are extremely relational. They are more central to their parents' lives than previous generations and are used to having the adults in their lives show great interest in them. They appreciate it when professors show that same interest, and they seem to be more willing to pursue learning outcomes when we connect with them on a personal level.

**Research-based methods.** Millennials have grown up in an era in which they were constantly engaged. When they are not interested, their attention quickly shifts elsewhere. This research suggests Millennials prefer a variety of active learning methods, as opposed to a more traditional lecture-only format.

APPENDIX D  
GOALS OF THE COMPUTER CLASSROOM COMMITTEE

1. Perhaps pair instructors to allow wider access to computer classrooms and to allow more instructors to become familiar with them.
2. The computer committee should focus not on duplicating other campus workshops but on how to use technology to teach writing in blended and online environments.
3. Offer demonstrations by instructors that are currently using the computer classrooms to show older and more resistant faculty how to use computers in writing classrooms.
4. Make it required for all English faculty members to observe an instructor in the computer classroom at least once.
5. Ask faculty members: what barriers prevent you from currently using computers to teach writing?
6. Set up a discussion board within the English department for faculty to chat specifically about their fears and apprehensions about using computers in the classroom. This can be a place to share stories of success and failure in an anonymous way.
7. Encourage more instructors to use Youtube and other websites and web documents in addition to standard textbooks.
8. Publicize the resources we currently have available to show how the computer classrooms benefit students as writers.
9. Refer to existing research to make the argument that not teaching with computers is hurting students.
10. Offer more sections of English 1010 that are reserved only for students with their own laptops.
11. Consider giving all students laptops as part of their student fees; this would support the idea of creating these kinds of sections.

12. Consider using an e-book instead of a textbook for English 1010 classes as a way of introducing students and instructors to the use of technology in writing.

APPENDIX E  
ONLINE EDUCATION READINESS ASSESSMENT

## Life Factors

Many students strongly desire to continue their education. However, other situations in their lives often prevent them from being able to do so. This section will ask questions in regards to the other elements in your life that may impact your ability to continue your education. **There are no right or wrong answers to this section.** The purpose of these questions is to help you and your school determine the degree to which these factors may complicate your ability to attend classes whether face-to-face or online. By being honest in this section, your school will be better informed about your particular situation. This information will allow your school to more effectively provide the resources for support that you need to be successful in achieving your educational goals.

1. People continue their education for many reasons such as getting a raise at work, keeping their current job, getting a better job, personal satisfaction, and/or they were told to go to school by someone like a parent or supervisor. To what degree do you feel like you have a **strong reason for enrolling in school?**

- I don't really have a reason for going to school.
- I vaguely understand why I need to go to school.
- Undecided
- I have a good reason for going to school.
- I have a very strong reason for going to school.

2. Do you have a **dedicated place** with a computer and Internet access at which you can work on school activities?

- No, I do not know where I will work on school tasks.
- I may be able to find a specific place to work on school tasks.
- Undecided
- I have a possible idea for where I can work on school tasks.
- I already have a specific place identified for working on school tasks.

3. To what degree are you anxious about your **personal health** impacting your ability to go to school?

- I am very concerned about my health impacting my ability to go to school.
- I am somewhat concerned about this.
- Undecided
- I am not really concerned about this.
- I am definitely not concerned about this because it is not a problem for me.

4. How many times have you ever had to **drop a college course** for any reason?

- 4 or more times
- 3 times
- 2 times
- 1 time
- I have never had to drop a college course.

5. To what degree are you **anxious about being able to learn** in a distance education course environment (for example a fully online or a partially online course)?

- I am very concerned about learning online.
- I am somewhat concerned about learning online.
- Undecided
- I am not concerned about learning online.
- I am not concerned at all and I am eager to get started.

6. To what degree are you anxious about the level of **support** that you will receive from your **employer** for you to go to school?

- I am very concerned about the level of support that I will receive from my employer for going to school.
- I am somewhat concerned about this.
- Undecided
- I am not really concerned about this.
- I am definitely not concerned about this because it is not a problem for me.

7. How many hours per week are you involved in **required, non-work responsibilities**? Examples include responsibilities such as caring for a sick parent or coaching a child's team.

8. To what degree are you concerned that you will make a **strong personal investment** (such as investing your time, money and other resources) on going to school and yet it will not benefit you very much when you graduate?

- I am very concerned that going to school will not really benefit me.
- I have wondered about the degree to which going to school will help me.
- Undecided
- I am fairly sure that going to school will benefit me.
- I am confident that going to school will benefit me.

9. To what degree are you anxious about your **financial ability** to go to school?

- I am very concerned about my financial ability to go to school.
- I am somewhat concerned about this.
- Undecided
- I am not really concerned about this.
- I am definitely not concerned about this because it is not a problem for me.

10. How many hours per week do you **work** a part-time or full-time job?

11. To what degree are you anxious about the level of **support** (for example from **family and friends**) that you will receive while going to school?

- I am very concerned about the level of support that I will receive from family and friends.
- I am somewhat concerned about this.
- Undecided
- I am not really concerned about this.
- I am definitely not concerned about this because it is not a problem for me.

12. To what degree are you concerned about not **having enough time** for school?

- Very concerned about not having enough time for school work.
- Somewhat concerned about not having enough time for school work.
- Undecided
- I think I will have enough time for school work.
- I am confident that I will have enough time for school work.

Answer Options for:

13. In relation to the general population of our society, I consider my **academic ability** to be:

- Considerably below average
- Slightly below average
- Average
- Considerably above average - in the top 20%
- Extremely above average - in the top 5%

14. Typically what **grades** have you made on prior school work?

- Mostly C's or below
- B's and C's
- Mostly B's
- A's and B's
- All A's

15. Which terms below best describe how many **distractions** (examples: children, loud noises, conversations) there are where you will primarily be working on your school work?

- Many distractions
- Some distractions
- Undecided
- Few Distractions
- No distractions

16. Which **place** is most similar to where you will primarily be working on school activities?

- While commuting
- A public place like a coffee shop
- At my job
- At my home
- On a school's campus

17. To what degree are you concerned about having a **specific place** to work on your course work?

- Very concerned, I am not sure where I will work on my courses.
- Concerned
- Undecided
- Not concerned
- Definitely not concerned, I have the place identified.

18. To what degree does this statement apply to you? "I am **committed** to my educational goals, and I'm **fully prepared** to do what it takes (for example, putting forth effort and making sacrifices) to attain my educational goals."

- Not true for me
- Somewhat untrue for me
- Undecided
- Somewhat true for me
- Completely true for me

19. How many hours per week can you **commit to school work**?

20. How much do you agree with this statement? "Of all of the things that I could be doing in this phase of my life, going to college is **one of the top priorities.**"

- I do not agree with this statement.
- I somewhat agree with this statement.
- Undecided
- I agree with this statement.
- I strongly agree with this statement.

APPENDIX F  
ONLINE EDUCATION READINESS: UTC

## Is online learning for me?

Learn about the skills that are recommended to be a successful online learner.

1. Do you have access to a computer and the Internet?  
 Yes  
 No
2. Are you comfortable with basic computers skills? [List of the recommended basic computer skills](#)  
 Yes  
 No
3. How do you work best?  
 With direct face-to-face supervision  
 On my own without face-to-face supervision  
 A combination of direct and on my own
4. Can you manage your time and remain organized in order to complete your course work?  
 Yes  
 No
5. How do you prefer to communicate?  
 Verbally  
 Through writing  
 A combination of verbal and written communication
6. Are you a self-starter?  
 Yes  
 No
7. What kind of student describes you?  
 A student who has a hard time making changes to a calendar  
 A student who can work with unexpected situations and make changes accordingly
8. Are you comfortable asking questions for clarification?  
 Yes  
 No
9. Are you severely restricted in the amount of time you can spend per week on your online course?  
 Yes  
 No
10. Are you open to sharing experiences to make connections in learning?  
 Yes  
 No

## VITA

Rowan Johnson was born in Johannesburg, South Africa, to the parents of Lee and Lorraine Johnson, and he has a younger brother, Kyle. He immigrated with his parents to Vancouver, Canada in 1995, where his family built a public company in the entertainment industry. Rowan moved to Seoul, South Korea in 2002, where he met his wife, Sybil Baker. While in South Korea, Rowan completed his Masters in Applied Linguistics and English Language Teaching from the University of Nottingham, England. In 2007, Rowan and Sybil moved to Chattanooga, TN, where he obtained a position as English lecturer at the University of Tennessee, Chattanooga (UTC). Rowan joined the Learning and Leadership program at UTC and degree conferral is anticipated in August 2013. Rowan is currently still employed at UTC and he enjoys traveling between semesters.