

**Teacher and student perspectives on a blended learning intensive
English program writing course**

by

Lars Jacob Ege Larsen

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Curriculum and Instructional Technology)

Program of Study Committee:
Denise Schmidt-Crawford, Co-major Professor
Elizabeth Ann Thompson, Co-major Professor
Ana-Paula Correia
Volker Hegelheimer
Peter Boysen

Iowa State University

Ames, Iowa

2012

Copyright © Lars Jacob Ege Larsen, 2012. All rights reserved.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	VI
ABSTRACT.....	VIII
CHAPTER 1: INTRODUCTION.....	1
Study context	9
Purpose of the Study.....	9
Research Questions	10
Significance of the Study.....	11
Organization of the Dissertation.....	12
CHAPTER 2: LITERATURE REVIEW	13
Blended Learning in Higher Education.....	13
Defining blended learning.....	14
Features and possibilities of blended learning.....	15
Blended learning research findings	18
A blended learning framework	26
Summary	29
Blended Learning in Second Language Acquisition	30
Teaching writing in a CALL environment	33
Blended learning implementation in language learning environments.....	35
Blended Learning Project Planning.....	43
Summary	45
Teacher Training and Support	46
Teacher training	46
Teacher Support.....	51
Summary	53
Chapter Summary	53
CHAPTER 3: METHODOLOGY	55
Introduction	55
Research methodology	55
Research context	58

The intensive English program.....	58
Writing level 4 and 5 courses.....	61
Paper-based course materials	61
Online course materials	61
Classroom and lab activities	63
Participants	64
Experimental group students	64
Experimental group teachers.....	65
Control group students	66
Control group teachers	67
Data Collection Techniques and Materials	68
Student pre-questionnaire.....	68
Student post-questionnaire.....	69
Teacher pre-questionnaire	79
Teacher post-questionnaire.....	80
Student interviews.....	81
Teacher interviews.....	81
Classroom observations.....	82
Teacher planning meeting observations	88
Research Procedures	89
Course preparation and teacher participant selection.....	89
Teacher participant training and course planning.....	92
Student participant elicitation and pre-questionnaire administration	95
Student participant training.....	96
Classroom observations.....	97
Teacher planning meetings.....	98
Student post-questionnaire and interview administration.....	100
Teacher post-questionnaire and interview administration.....	101
Data Analysis.....	102
Summary	105
CHAPTER 4: RESULTS.....	106

RQ 1: What impact does a training and support program have on the teachers' experience of designing and teaching in a BL environment?.....	106
Pedagogical training and planning.....	111
Technological preparation, support, and integration	116
Collaboration.....	124
Teaching impact.....	128
Summary	136
RQ 2: How do students describe the productiveness of the blended learning environment in an IEP writing course?.....	137
Learner access.....	146
Learner self-discipline	147
Learner attitude	149
Technical issues.....	153
Summary	154
RQ 3: How do students perceive their teacher's practice and behavior in a BL environment?.....	155
Organization.....	162
Communication.....	163
LMS utilization and online activities	165
Teacher feedback.....	168
Summary	171
RQ 4: To what degree does teacher practice and behavior affect students' perceptions of the course?	172
CHAPTER 5: DISCUSSION	177
Introduction	177
Summary of the study.....	177
Training and Supporting Teachers in a BL Environment.....	180
Pedagogical training and planning.....	180
Technical preparation, support, and integration.....	183
Collaboration.....	185
Teaching impact.....	186
Student Perceptions of the Blended Learning Environment.....	190
Students' Perceptions of the Teacher Practice and Behavior	202

Summary	209
Limitations.....	213
Practical Implications for Teaching ESL in Blended Learning Environments.....	215
Theoretical Implications for Researching Blended Learning ESL Environments	217
Concluding Remarks.....	219
APPENDIX A: TOBIN FRAMEWORK CATEGORIES	222
APPENDIX B: WEBLEI SCALES AND ITEMS	223
APPENDIX C: KEY COMPONENTS OF A BLENDED LEARNING TEACHER TRAINING COURSE	224
APPENDIX D: WRITING LEVEL 4 AND 5 OUTCOMES.....	225
APPENDIX E: LEARNER TRAINING ACTIVITIES AND PREPARATION MATERIALS	226
APPENDIX F: TEACHER PARTICIPANT DATA.....	229
APPENDIX G: STUDENT PRE-QUESTIONNAIRE.....	230
APPENDIX H: TEACHER PRE-QUESTIONNAIRE	233
APPENDIX I: STUDENT POST-QUESTIONNAIRE	236
APPENDIX J: TEACHER POST-QUESTIONNAIRE	245
APPENDIX K: STUDENT POST INTERVIEW QUESTIONS.....	249
APPENDIX L: TEACHER POST INTERVIEW QUESTIONS.....	250
APPENDIX M: RESEARCHER OBSERVATION SHEET	251
REFERENCES	252

ACKNOWLEDGEMENTS

As I put the finishing touches on this dissertation I cannot help to think about how fortunate I am to have had so much help and encouragement from the people around me. While it is not feasible to give a detailed list of who has done exactly what, I shall try to convey my sincere gratitude to everyone involved.

First of all, I would like to thank my co-major professors Dr. Ann Thompson and Dr. Denise Schmidt-Crawford. Both have provided important advice and guidance during the time I have worked on this project. In particular, Dr. Schmidt-Crawford provided invaluable assistance in the form of very detailed written feedback on my drafts and personal meetings in which she took ample time to discuss her suggestions for revisions with me. The importance of having the support of an experienced faculty member and researcher while conducting one's dissertation study cannot be overstated and I am grateful for her assistance. Likewise, I am indebted to my committee members who took the time and effort to read my paper and provide valuable feedback.

I also want to express my appreciation to the teachers and students who participated in my study. Getting participants for research studies is rarely easy and I benefitted immensely from working with such helpful, dedicated, and professional language teachers. In the same vein, I must express my gratitude to the director of the IEP program, Dr. Barbara Schwarte, who not only allowed me access to the teachers, students, and test data in the program, but who also encouraged me to share the knowledge I gained with the teachers and administrators in the intensive English program.

Others, who have been instrumental in helping me complete this project are Annelise Andersen and Bob and Colleen Staggs. Whether their help involved lending an ear when I had hit a snag or helping with lawn mowing and snow removal, so I could spend more time writing, their help was important and much appreciated.

Lastly, I must somehow try to convey the enormous gratitude I feel towards my wonderful wife, Karina. Her never-ending support, patience, help, and love are what enabled me to complete this project. It is difficult for me to express how important her support and assistance has been for me as I worked through the ups and downs of conducting a study of this size and complexity. This is particularly impressive considering that she was writing her own dissertation at the same time. I can only hope I have been able to return the many favors and support she has extended me during this process.

As this project comes to a close, I am truly grateful for the help I have received from everyone involved. Thank you very much, all of you!

ABSTRACT

The use of Blended Learning (BL) in higher education has increased significantly during the past decade. This dissertation investigates the use of BL with ESL writing students in an intensive English program. The purpose was to investigate how to prepare ESL teachers to create a productive BL environment for their ESL writing students. This includes an investigation of how to best train the teachers in BL pedagogy and online teaching technology and a measure of the students' perceptions of the BL environment with respect to its productiveness. Finally, the study sought to discover how students experienced the teacher's practice and behavior and the extent to which these factors affected student perceptions of the course and BL environment in general. A mixed-methods approach was employed which involved quantitative and qualitative data collection from 41 ESL students and five ESL teachers. The teachers were trained in BL pedagogy and given pedagogical and technical support throughout the semester, after which both students and teachers were given questionnaires and were interviewed in order to determine their experiences in the BL environment. The findings indicate that the teachers needed a fairly minimal amount of pedagogical and technical training to employ BL successfully. Collaborative planning also proved very beneficial, together with technical and pedagogical support throughout the semester. Students were found to work more autonomously and focused while becoming more responsible for their own learning. This enabled the teachers to better provide personalized assistance, keep better track of student progress, and cover more materials. Students also liked learning in the BL environment and indicated they would prefer this to

more conventional classes. Lastly, teacher practice and behavior was found to have minimal influence on student perceptions of the BL environment though some results suggested that teacher experience might be a predictor of student satisfaction with their teachers.

CHAPTER 1: INTRODUCTION

Today, college enrollment in the US is steadily increasing. According to the Pew Research Center college enrollment of 18- to 24-year-olds has increased to 39.6% of the population in this age group in 2008. This represents an increase of 0.8% since 2007 and 15.6% since 1973. This increase in enrollment has taken place during a severe national recession that has seen educational funding drop and tuition increase. During the past decade (academic years 1999-2000 to 2009-2010) tuition has increased by 4.9% per year beyond general inflation for public four-year colleges and universities (Fry, 2009). At the same time, average state support for higher education has declined 1.9% between fiscal year 2009 and fiscal year 2011 (Palmer, 2011). The net result of these developments is that college administrators find themselves with more people to teach, but less money to do it with.

Another more fortunate development that has taken place over the past 10-15 years is the rapid advance in computer- and communications technology. Today, an advanced cell phone almost has the computing power and features of a desktop computer from a decade ago. Because of the ever-increasing possibilities enabled by faster computers and internet connections it is difficult to imagine a university or college that does not maintain several large and small computer labs for instruction and provides their faculty with one or more learning management systems such as Blackboard or Moodle. At the same time, the internet has developed very fast during the past decade and is today an important resource

for research, learning and socialization for most students. This technological development has gradually opened up new instructional possibilities in colleges and universities and allowed administrators to seek greater educational cost-effectiveness similar to that which has been achieved by several corporate institutions (Chute, Williams & Hancock, 2006; Dziuban, Hartman, Juge, Moskal & Sorg, 2006; Graham, 2006; Lewis & Orton, 2006; Pease, 2006; Ziob & Mosher, 2006).

A growing body of literature on blended learning (BL) is documenting the fact that its use is clearly on the rise in higher education (Dziuban, Hartman, & Moskal, 2004; Garrison & Vaughan, 2008; Graham, 2006; Osguthorpe & Graham, 2003; Shea, 2007). In fact, Garrison and Kanuka (2004) and Bransford et al. (2000) suggest that not only is BL an acceptable pedagogical approach, it also has the potential to transform higher education. Likewise, Hiltz and Turoff (2005) believe that the introduction of asynchronous learning networks to campus courses will come to be viewed as a substantial development in the improvement of learning. Thorne (2003) believes that blended learning is a natural evolution of the learning agenda and one of the most important advancements of this century. Masie (2006) and Massy (2006) actually both go as far as to claim that blended learning may become so commonplace and integrated into everyday instructional practice that we will drop the ‘blended’ prefix and simply refer to it as learning. Finally, Ross and Gage (2006) argue that:

In the long run, almost all courses offered in higher education will be blended. ... It is almost a certainty that blended learning will become the new traditional model of course delivery in ten years. ... What will differentiate institutions from one another will not be whether they have blended learning but rather how they do the blending and where they fall on the blended learning spectrum. (p. 167)

Considering statements like these it is safe to say that BL is an instructional approach that deserves to be researched in depth.

Historically, learning has been a combination of distance (distributed) learning technologies and face-to-face (FTF) instruction. For example, the invention of the printing press in the 15th Century enabled the blending of FTF, teacher-led instruction with reading homework. Likewise, the 20th Century saw the development of audio recordings, television transmissions, online text-based databases and discussion boards, just to name a few, which “imaginative educators, with the assistance of technical experts, have found ways to exploit and combine (or blend)...to meet their learning objectives” (Hoffman, 2006, p. 29). Graham (2006) goes on to point out that historically, “distributed learning environments placed emphasis on learner-material interactions, while face-to-face learning environments tended to place priority on the human-human interaction” (p. 5). The reason for this is that existing technology did not allow for high-quality synchronous interaction in the distance learning environment. However, “the widespread adoption and availability of digital learn-

ing technologies has led to increased levels of integration of computer-mediated instructional elements into the traditional face-to-face learning experience" (p. 7). Thus, it may be fair to argue that the upsurge of interest in blended learning within the past decade, as evidenced by the volume of publications within this period, came about due to the increased capabilities of modern computers. This is also clearly demonstrated in Graham's (2006) definition of BL, which he sees as a combination of face-to-face (FTF) and computer-mediated instruction. This definition is, however, fairly simplistic and will be amended and explained in greater detail in chapter 2.

Stating that BL is only good for saving money would be a gross simplification. As the above paragraphs allude to, there are several other reasons why the use of BL is a positive development. For example, there are many reasons why an instructor might choose to introduce BL in a course. Osguthorpe and Graham (2003) identified the following six reasons for using BL:

1. Pedagogical richness
2. Access to knowledge
3. Social interaction
4. Personal agency
5. Cost-effectiveness
6. Ease of revision

These reasons are not listed in order of importance and, as one might imagine, some are more frequently invoked than others. In separate studies, Graham, Allen and Ure (2003, 2005) found that, by a great majority, BL was implemented for the reasons of (1) improved pedagogy, (2) increased access and flexibility, and (3) increased cost-effectiveness.

Looking at these reasons for using BL it is obvious that both instructors and administrators have several good reasons for wanting to use it. Institutional motivations for promoting BL may focus on the potential savings that can be realized by moving some contact hours online, which reduces the need for physical meeting space and classrooms with their associated costs. Likewise, the desire to promote personal agency and increased learner responsibility for their own learning may originate as much from institutional policies and goals as from individual teacher desires. Furthermore, for teachers to create quality BL environments institutions need to invest in the necessary hardware and software such as servers and content management systems, and make these available to teachers and students while providing the needed technical support. This highlights an interesting contrast: Blum, Goodyear and Ellis (2007), in their review of representative research into blended learning in universities, found that “a substantial portion of the literature is written by teachers researching their own innovative educational practice” (p. 232). Nonetheless, institutional administrators have a great say in why, when, and how BL is implemented not to mention the quality of these environments. Instructors, on the other hand, may be attracted to BL because it can provide for added pedagogical richness, greater access to knowledge, and increased opportunities for social interaction. Several of these issues are central to the topic

of this dissertation. Shea (2007) provides a good introduction to the main issues in his discussion of possible conceptual frameworks for learning in blended learning environments.

Shea (2007) sets out by asking what instructional problem blended learning solves? He claims that a frequent answer to this question is increased student *access* in two different ways: In terms of time and physical location and in terms of increased capacity for institutions because there are fewer classroom space constraints and hence greater ability to serve more students. However, he also points out that the quality of education must stay the same or improve after the transition to a blended learning environment, otherwise there will be a net loss: Students, faculty and alumni will not support lower quality programs. This leads him to subsequently ask how are institutions managing to maintain or increase the quality of instruction in blended learning environments? This, in turn, necessitates a definition of ‘quality’ and what constitutes a ‘quality’ learning environment? Shea actually defines *quality* as “high levels of learning and high levels of student and faculty satisfaction and ultimately increased access and more efficient deployment of existing physical resources” (Shea, 2007, p. 20). Consequently, no matter what the motivation is for introducing BL at any given institution, matters of quality and student and teacher satisfaction are fundamental to a successful implementation. This dissertation study focuses on these three aspects by following a conceptual framework suggested by Tobin (1998).

When Tobin (1998) set out to study an online learning environment he “decided to probe the nature of learning environments using a hermeneutic approach that incorporated the perspectives of the students to the maximum extent” (p. 145). Previous studies (Jegede

et al., 1998; Maor & Fraser, 1996; Teh & Fraser, 1994), that investigated learning environments involving computers or distance education, primarily used instruments with drew on pre-existing scales or categories of questions such as “open-endedness” and “satisfaction” (Maor & Fraser, 1996, p. 406) for their data collection. Tobin (1998) points out that for each of these studies the scales were chosen for their salience to the research questions and because of a desire to develop better “instruments to explore computer environments and distance learning” (p. 144). Tobin’s focus, however, was on trying to discover “what aspects of the learning environment would be considered by students to have the greatest salience?” (p. 144). His investigation resulted in the discovery of 15 categories grouped into three dimensions or scales: Emancipatory activities, Co-participatory activities, and Qualia. Thus, a framework was created for examining the productivity of learning environments and to provide insights into how these environments can be improved. These categories and dimensions are discussed in greater detail in Chapters 2 and 3.

Shea (2007) further proposes that the quality of blended learning environments be investigated through a conceptual model because it:

allows us to make testable hypotheses about the preconditions and activities likely to result in high levels of learning and high levels of student and faculty satisfaction and ultimately increased access and more efficient deployment of existing physical resources. (p. 20)

Shea proceeds to offer several evaluative frameworks that he finds usable, among others: 'How People Learn' (Bransford et al., 2000); the Community of Inquiry Model (Garrison, Anderson, & Archer, 2000); and finally Chickering and Gamson's (1987) Principles of Good Practice in Undergraduate Education. Each of these frameworks contains important aspects and factors that may create a quality blended learning environment. In addition, Shea evaluated various other aspects of BL environments, including important components of them and influences on what goes into a quality blended learning environment. For example, he found that integration of online and face-to-face activities are important and suggested that an analysis of learners' online interactions can help improve the instructional design of BL environments. Likewise, he suggested that learner characteristics, learning goals, available resources, and faculty characteristics need to be considered because they are important components of, and influences on, a quality blended learning environment.

While Shea's (2007) in-depth discussion and suggestions are interesting and inspiring it is also obvious that the "road map" (p. 32) he suggests is very complex and takes into account a multitude of factors that would be very difficult to include in any single research study. Additionally, his suggested frameworks do not really allow for the necessary focus on student perceptions compared to Tobin's (1998) framework. However, his finding that the integration of online and face-to-face activities is important and his suggestion to consider the influence that faculty characteristics has on the blended learning environment are both valid and will be investigated and discussed in this dissertation study. Having presented the main factors and influences on the quality of blended learning environments and outlined

the framework that will be used to investigate the BL environment in this dissertation study the study context, purpose, research questions, significance, and organization will be outlined next.

Study context

The context for this dissertation study is an intensive English program (IEP) at a large Midwestern university in the United States. This environment was selected for several reasons. First and foremost, the researcher's background in applied linguistics provided good insight into this particular environment, including the challenges faced by teachers and the needs and desires of students. As described in Chapter 3, the students of this program are very focused on the quality and purpose of the courses they take. Second, there is a sizeable body of research on the application of blended learning for English as a second language (ESL) and English as a foreign language (EFL) instruction. Third, this particular IEP has experienced problems finding enough classrooms at certain times of the day to accommodate the classes, so alternative instructional approaches which require fewer classrooms are beneficial to the program administrators. Finally, the program director is very open to research requests from students and was able to help provide access to a sufficiently large amount of similar writing classes.

Purpose of the Study

The purpose of this study is to investigate how to prepare ESL teachers to create a productive blended learning environment for students in an intensive English program

writing course. A productive blended learning environment is, for the purposes of this study, defined as one in which students can learn and which provides them with a positive learning experience. A positive learning experience for students is defined as one that meets their values, priorities and needs. More specifically, this study seeks to accomplish three goals. The first goal is to discover whether a teacher training- and support program based on the recommendations of Chickering and Gamson (1987), Kaleta, Skibba, and Joosten (2007), and Rochelle et al. (2000) can meet the needs of teachers as they seek to create a blended learning environment for their students. The second goal of this study is to measure the students' perceptions of the blended learning environment with respect to its productiveness. The third and final goal is to discover how students experience the teacher's practice and behavior and the extent to which these factors affect student perceptions of the course and blended learning environment in general.

Research Questions

The study aims at answering the general question, "How do you prepare teachers to create a productive blended learning environment that provides a positive learning experience for students in an intensive English program writing course?" Specifically, the following research questions will be addressed:

1. What impact does a training and support program have on the teachers' experience of designing and teaching in a BL environment.

2. How do students describe the productiveness of the blended learning environment in an IEP writing course?
3. How do students perceive their teacher's practice and behavior in a BL environment?
4. To what degree does teacher practice and behavior affect students' perceptions of the course.

Significance of the Study

Findings from this study will contribute to the fields of teacher training, Computer Assisted Language Learning (CALL), and the area of blended learning research. First, this study provides a methodologically well-founded approach to preparing ESL teachers for teaching writing in a blended language learning environment, which few, if any, studies have investigated thus far. This, in turn, allows this study to make possible recommendations to institutional administrators and program directors on how to best prepare and support teachers for teaching in a blended language learning environment. This is a valuable contribution because the already ongoing trend of transitioning college courses to a blended learning model is likely to continue and to significantly increase in the coming years. Another possible contribution of this study centers on the conceptual framework used for evaluating the productiveness and learner perceptions of a blended learning environment. The Web-based Learning Environment Instrument (WEBLEI) (Chang & Fisher, 2003), based on Tobin's (1998) framework, is a comprehensive, flexible, reliable, and valid instrument for eliciting student perceptions of a blended learning environment that can help compare the results of different studies, whether they center on language learning or

not. The final potential contribution of this study concerns the investigation of how teacher practice and behavior may influence student perceptions of a blended language learning environment, which few, if any, studies have investigated to date.

Organization of the Dissertation

This dissertation consists of five chapters. The first chapter provides a detailed introduction to the study including a definition of blended learning, the conceptual framework used, and the study's purpose and significance. Chapter 2 contains a review of the literature on blended learning, the implementation of blended learning in CALL and SLA, and teacher training and support. Chapter 3 provides an overview of the research methodology, a description of the context and participants, and a detailed overview of the research procedures, including the data collection materials and analysis. Chapter 4 presents the results for each research question and Chapter 5 discusses these results in light of the literature after which it ends with a discussion of implications and limitations of the study, before finally providing a conclusion and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

The purpose of this dissertation study was to investigate how to prepare ESL teachers to create a blended learning environment that addresses the values, priorities and needs of students in an intensive English program writing course. A review of previous research and theories relevant to this study can provide a foundation for understanding how teacher training and support may affect the pedagogical qualities and learner outcomes of a blended language learning environment. This chapter is organized into three main sections: (1) BL in higher education, (2) BL implementation in SLA, and (3) BL teacher training and support. The first section will examine how BL is being used in higher education.

Blended Learning in Higher Education

For several reasons, the use of BL is clearly on the rise in higher education (Bliuc, Goodyear & Ellis, 2007; Dziuban, Hartman, & Moskal, 2004; Garrison & Vaughan, 2008; Graham, 2006; Oh & Park, 2009; Osguthorpe & Graham, 2003; Shea, 2007). In fact, using asynchronous learning networks with campus courses may be a substantial development in the improvement of learning (Hiltz & Turoff, 2005) which will eventually lead to all learning being of the blended variety causing the ‘blended’ prefix to be dropped (Masie, 2006; Massy, 2006; Ross & Gage, 2006). But what is it that is so attractive about blended learning? Before turning to this question, it will be beneficial to discuss in more detail how blended learning may be defined and expand upon the definition by Graham (2006).

Defining blended learning

Graham's (2006) definition of BL as a combination of face-to-face (FTF) and computer-mediated instruction falls short on at least two accounts. First, it fails to account for the great variety within BL environments. For example, a course might have five weekly contact hours of which two are conducted online, or a teacher may decide that students will meet alternate weeks FTF and online, in order to take advantage of the different affordances rendered by the two environments. Yet other courses may be conducted primarily online and require only one or two FTF meetings during a semester, in which students conduct group work and presentations. Critique has also been leveled at the term 'blended learning' itself. Oliver and Trigwell (2005) claim that what is called 'blended learning' is frequently not about learning but more about teaching. Instead, they believe that 'blended pedagogics', 'blended teaching' and 'learning with blended pedagogies' better capture the true meaning of the concept. Garrison and Kanuka (2004) also point out that trying to define BL raises issues surrounding implementation, design, and context:

At its simplest, blended learning is the thoughtful integration of classroom face-to-face learning experiences with on-line learning experiences. (...) At the same time there is considerable complexity in its implementation with the challenge of virtually limitless design possibilities and applicability to so many contexts. (p. 96)

For the purposes of this study the definition proposed by Laster, Otte, Picciano and Sorg (2005), cited in Picciano and Dziuban (2007, p. 9) strikes the right balance.

1. Courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner; and
2. Where a portion (institutionally defined) of face-to-face time is replaced by online activity.

This definition was adopted by the participants at the Sloan-C Consortium during a series of blended learning workshops held in 2004 and 2005 at University of Illinois-Chicago, which were attended by “thirty professional educators with online learning experience” (Picciano & Dziuban, 2007, p. i). The reason this definition is adopted for this dissertation study is that it acknowledges the importance of the instructional pedagogy, allows for a variety of blends in a temporal sense, and stays current by limiting itself to online and FTF activities. So far, BL has been defined and situated historically. Next, the various features and possibilities of BL are discussed.

Features and possibilities of blended learning

There are several reasons why a BL approach can be beneficial. Osguthorpe and Graham (2003) identified the following six reasons for using BL:

1. Pedagogical richness

2. Access to knowledge
3. Social interaction
4. Personal agency
5. Cost-effectiveness
6. Ease of revision

Of these six reasons Graham, Allen and Ure (2003, 2005) found that BL was primarily implemented for the reasons of (1) improved pedagogy, (2) increased access and flexibility, and (3) increased cost-effectiveness. Knowing these possible reasons why BL is used in many college courses brings up the topic of who is promoting this use, how it is being integrated into college courses, and whether it is, in fact successful.

It is generally well established that there is a savings potential in moving some classroom contact hours online (see, for example, Dziuban & Moskal, 2001; Oh & Park, 2009). This reduces the need for physical meeting space and classrooms with their associated costs. While cost-effectiveness is undoubtedly a significant motivation for college administrators to support the use of BL, it is not the focus of this dissertation study and will not be addressed. Notwithstanding the issue of cost-effectiveness, it is clear that administrators play an important role in the promotion and success potential of BL in colleges. Among other things, institutional goals and policies may seek to promote personal agency and increased learner responsibility for their own learning. Many educational institutions also seek to reach as many potential students as possible, which means access and flexibility are likely to be prioritized by administrators. Likewise, investments in

hardware and software such as servers and content management systems are needed as is pedagogical and technical training and support of faculty, all of which must be facilitated and coordinated by administrators. Thus, even though Bliuc, Goodyear and Ellis (2007), in their review of BL studies, found that “a substantial portion of the literature is written by teachers researching their own innovative educational practice” (p. 232), it is clear that institutional administrators have a great say in why, when, and how BL is implemented at the college level, not to mention the quality of these BL environments. However, as much as administrators may desire and influence BL applications in college settings the instructors are at least as important, if not more.

According to Osguthorpe and Graham (2003) instructors may be attracted to BL because it can help improve pedagogy, help provide greater access to knowledge, and facilitate increased opportunities for social interaction. This collection of factors is brought into play by several different influential actors. This makes for a somewhat confusing field of research in which different researchers focus on a multitude of variables, factors, and variants of instructional approaches in an attempt to gain knowledge about the usefulness of BL. As a result of this somewhat muddled research focus in the area of BL, several researchers (Bliuc, Goodyear, & Ellis, 2007; Shea, 2007; Vignare, 2007) call for more and better research that goes beyond the case study and seeks to establish useful frameworks for the integration and application of BL in academia. They also believe that research should focus on key aspects such as access to, and quality of, BL environments.

Blended learning research findings

In the debate about research into the use of BL in academia Shea (2007) posits that BL often solves the problem of *access*. More specifically, student access to education is increased in terms of time and physical location and in terms of reducing or eliminating the need to be in a physical classroom space at a specific time. With less demand for physical classroom space, because part of the learning takes place online, institutions are able to serve more students with the same facilities. Shea, however, points out that the *quality* of education must stay the same or improve when a blended learning environment is implemented, otherwise the net result is a loss. Shea (2007) defines quality as “high levels of learning and high levels of student and faculty satisfaction and ultimately increased access and more efficient deployment of existing physical resources” (p. 20). Evidently, Shea considers the issues of learning and student and teacher satisfaction to be fundamental for a successful implementation of BL. This view is echoed by Bliuc, Goodyear, and Ellis (2007) who call for research that focuses on learning outcomes and the quality of students’ learning experiences. Likewise, Vignare (2007) calls for more research on the effectiveness of BL. The focus of this dissertation study takes its departure in teacher training on how to teach in a BL environment. More specifically, there is a focus on student and teacher satisfaction with their learning and teaching experiences in the BL environment. This also ties in very well with the definition of BL used in this dissertation study vis-à-vis its focus on the pedagogical value of BL environments. Table 1 presents several representative studies that are reviewed in order to gain an overview of the status of the field of BL and examine

whether and how BL environments can be successfully implemented in academic environments.

Table 1. Overview of findings from studies of higher education courses utilizing a BL environment

Findings related to BL use	Studies
Improved learning outcomes	Amaral & Shank (2010); Boyle, Bradley, Chalk, Jones, & Pickard (2003); Collopy & Arnold (2009); Dziuban, Hartman & Moskal (2004); Lei (2010); López-Pérez, Pérez-López, & Rodríguez-Ariza (2011); O'Toole & Absalom (2003); Vaughan (2010)
Confirmed effect on student satisfaction and motivation	Amaral & Shank (2010); Collopy & Arnold (2009); Dziuban, Hartman & Moskal (2004); Fulkerth (2010); López-Pérez, Pérez-López, & Rodríguez-Ariza (2011); Vaughan (2010);
Improved classroom dynamics:	Amaral & Shank (2010); López-Pérez, Pérez-López, & Rodríguez-Ariza (2011); Osguthorpe & Graham (2003); Shroff & Vogel (2010); Singh (2010)
Improved flexibility	Collopy & Arnold (2009); Fulkerth (2010); Graham (2004); Macedo-Rouet, Ney, Charles, & Lallich-Boidin (2009); Oh & Park (2009); So & Bonk (2010)
Stated reasons for introducing BL:	Davis & Fill (2007); Fulkerth (2010); Moore & Gilmartin (2010); Oh & Park (2009); Vaughan (2010)

As can be seen from the nineteen representative studies evaluated in Table 1 there seems to be a general consensus that BL can produce several positive results in a variety of college courses.

Improved learning outcomes

With regard to learning outcomes, BL has been found to reduce drop-out rates, raise exam pass rates, and raise student grades. For example, López-Pérez, Pérez-López, and Rodríguez-Ariza (2011) examined the use of BL with 985 first-year university students in a general accounting course at the university of Grenada. They found that by using various kinds of online materials and exercises to consolidate the content of the FTF lessons, including online evaluations, student drop-out rates were reduced and exam pass rates increased. Students' final grades also improved while the teacher achieved a greater degree of involvement with the students in the learning process. Finally, students experienced that the BL environment contributed to a high degree of utility and improved their motivation and satisfaction. These findings were mirrored by Vaughan (2010) who conducted a case study with 70 participants which compared an experimental psycholinguistics course before and after its redesign that focused on alignment of learning outcomes, assessment activities and the use of technology. This course was included in an institutional initiative to shift teaching and learning from a passive lecture approach to a more engaged and collaborative one through the use of BL. The redesigned course saw student satisfaction increase from 50% to 75% while retention improved and the class grade average increased substantially.

Confirmed effect on student satisfaction and motivation

Several studies also demonstrate how student satisfaction and motivation can increase as a result of using a BL environment. An example of one such study is Collopy and Arnold (2009) who examined the work of 80 undergraduate teacher candidates who participated in modules delivered in one of three ways: online only, partially blended, and fully blended. Their results showed that learners in the two types of blended classes reported “significantly greater feelings of competence and comfort in putting what they learned into practice” (Collopy & Arnold, 2009, p. 97) and were more satisfied with how their group work teams functioned compared to the online-only group. In addition, students in the BL classes reported “significantly higher levels of learning” (p. 96).

Another study conducted by Fulkerth (2010) described how a significant number of undergraduate and graduate courses at Golden Gate University, which focuses on the fields of tax, law and business, were converted to BL courses. In the process, the university sought to address student needs for shorter courses by reducing each course from 10-15 weeks to 8 weeks. Fulkerth reports how student satisfaction has been maintained despite the fact that the new courses include the same amount of student work. He also states that the redesign has proved “very beneficial for the participants, for students, and for the quality and overall look-and-feel of the courses involved” (p. 53).

Improved classroom dynamics

Blended learning has also been found to have several positive effects on classroom dynamics and intellectual interaction. One such study that found an increase in student

preparedness is Amaral and Shank (2010). Their study, involving 450 students, examined the redesign of an introductory college chemistry course. The redesign involved the ANGEL (A New Global Environment for Learning) LMS and included detailed study guides for the students to use the course's online and paper-based materials most effectively. This led to better student understanding of course content and an increase in student preparedness for class. Faculty also introduced 'clickers' into the course, which are electronic transmitters that allow faculty to conduct polls and ask questions of students in larger lecture-oriented courses. The use of clickers allowed faculty to better interact with the students and improved student engagement. Shroff and Vogel (2010) conducted a study involving 77 college students in a business course in Hong Kong. Their aim was to assess the effect of BL on individual student interest using a blend of online and FTF discussions. While they found that there was no statistically significant difference in individual interest between students doing online and FTF discussions, they did observe that students were more eager to engage in textual dialogue and had greater participation in online discussions. They concluded that the online discussions helped further individual student assimilation, reflection and critical thinking.

Improved flexibility

One of the central observations in Collopy and Arnold's (2009) study involved the flexibility of the BL materials. The authors outline how online modules were easy to share, which promoted consistency and flexibility of use between different instructors and courses. Within courses, individual instructors could also mix and match FTF and online

materials, just as they could conduct both FTF and online discussions. These opportunities all contributed to increased instructional flexibility. These findings were mirrored by So and Bonk (2010). Their study involved forming a panel of internationally recognized BL experts whose opinions on the use of BL approaches in computer supported collaborative learning environments were elicited using a web-based Delphi method. The experts agreed that BL “offers greater flexibility and opportunities for community building among students” and that “instructors can share their ideas and course materials more readily with each other” (So & Bonk, 2010, p. 197). So far, the review of the literature in the field has demonstrated how BL can be more flexible for students, faculty, and administrators than traditional FTF instruction while improving classroom dynamics and having a positive impact on student motivation. However, these are not the only reasons faculty and university administrators have for implementing BL approaches.

Stated reasons for introducing blended learning

Taking a look at why universities typically introduce BL is both important and instructive. The reasons identified in this sample of studies indicate that administrators and teachers tend to focus on student needs and expectations, enhancing the student experience, engagement and accessibility, and promoting student retention and learning. In Moore and Gilmartin’s (2010) study, for example, the university desired to enhance the student experience and attempted to do so by focusing on a revision of the structure, content and learning outcomes of a human geography course. Their goal was to improve student retention and engagement. In the same vein Davis and Fill (2007) describe how two

British and two American universities collaborated to improve their teaching of geography by using a BL approach. The specific aims involved, among other things, the development and use of innovative technological approaches to learning and teaching in an effort to see how these would impact the students. The ultimate goal was to improve student achievement, retention and recruitment while seeking to improve their learning experience. While these findings outline why universities introduce BL they are essentially individual studies that are difficult to generalize across different institutions. However, Oh and Park (2009) specifically set out to investigate how U.S. universities are involved in blended instruction.

Oh and Park (2009) surveyed 133 faculty members and 33 staff members or coordinators from university centers dedicated to improving teaching and learning at the universities. These participants represented 109 public and 42 private universities. Oh and Park found, among other things, that BL is common in most of the universities and that the most prevalent format involves FTF instruction with supplementary online components, which 64.4% of the faculty used. Another 19.7% taught courses in which less than 50% of the course content was delivered online. Oh and Park also discovered that more than 50% of the universities in the study had as their goal to increase student accessibility to their programs through the use of BL. Faculty in the study reported that using BL improved the quality of instruction and helped overcome some of the limitations associated with purely online instruction. While the results from these studies are very positive and encouraging, not all studies saw equally positive results.

Moore and Gilmartin (2010) describe the effects of transforming a human geography course into a BL format at University College Dublin. While some positive results were realized with the 370 participants, student retention and performance suffered. Thus, even though the students reported working harder with classmates outside of class and spent more time preparing for class tutorial almost 60 students withdrew from the course within the first two weeks, which was more than the year prior to the redesign and more than in other concurrent courses. In addition, student average grades went down, which the authors attribute to the need for continuous engagement in the course as opposed to being able to engage in the more traditional ‘cramming’ prior to the exam. Lastly, the authors point out that it was challenging for the students to have to become more self-directed in their learning. Contradictory findings, however, are not the only problems within this field of research.

Methodological problems and issues

In their review of research into BL in universities Bliuc, Goodyear and Ellis (2007) identify several problems with existing studies and their methodologies. They conclude that there is a “need for greater consensus on basic definitions of blended learning, more research that offers different perspectives and methods of collecting evidence about the value of blended learning, and research that is comparatively more holistic or systemic in its focus” (p. 24). Vignare (2007) also concluded that there is a need for more research involving multiple institutions. Additionally, Bliuc, Goodyear and Ellis (2007) point out that survey-based studies and studies with a mixed methodology are infrequent in the literature.

Finally, Shea (2007) and Oh and Park (2009) call for the use of better, more explicit theoretical or conceptual frameworks in order to evaluate the use of BL in academic settings. The studies listed in Table 1 show some evidence that this situation is improving. Thus these studies are a balanced mix of case studies and survey-based studies that involve several courses or institutions and some of the studies use mixed-methods approaches, as well. However, few studies focus on faculty training and its impact on the quality of a BL environment. Thus, more studies are still needed to be able to reach better, more generalizable conclusions about the factors that affect the quality of BL environments in academic settings from both faculty and student perspectives.

A blended learning framework

Though Shea (2007) suggests various framework options for evaluating the quality of a BL environment, such as 'How People Learn' (Bransford et al., 2000); the Community of Inquiry Model (Garrison, Anderson, & Archer, 2000); and Chickering and Gamson's (1987) Principles of Good Practice in Undergraduate Education, none of these were deemed appropriate for this dissertation study. The reason is that they all presuppose a focus on specific variables and aspects of the environment. For example, the Community of Inquiry Model emphasizes various forms of 'presence', such as teaching presence, cognitive presence and social presence. Likewise, 'How People Learn' dictates a focus on assessment. As a result, none of these foci were as well suited to measuring the quality of a BL environment from a student perspective as that of Tobin (1998).

Tobin (1998) decided to focus on the perspective of the students in his evaluation of an online learning environment. The students were 20 elementary and middle school teachers enrolled in a graduate degree program in science education. Tobin's evaluation helped him discover which characteristics of a learning environment were most important to the students, regardless of the theoretical background for the study or the instructional approach with which the instruction was designed or delivered. Through a comprehensive qualitative data collection and analysis he was able to identify three salient dimensions, covering 15 diverse categories; Emancipatory activities, Co-participatory activities, and Qualia. Tobin stated that "the three dimensions that were pertinent to this study provide a framework for examining the extent to which learning environments are productive and for ascertaining how learning might be improved" (p. 159). It is important to note that Tobin's study originally concentrated on a blended course where students primarily learned through an online computer application called Connecting Communities of Learners (CCL). Students did meet face to face during the summers and on several occasions during the academic year. However, Tobin's focus is primarily on the CCL. For a list of the different dimensions and categories please see Appendix A. The dimensions and categories will now be discussed in greater detail.

The first of the three dimensions, Emancipatory activities, cover the three categories of *convenience, efficiency, and autonomy*. Thus, the learners focused on the convenience with which they could learn and the efficient use of time that the CCL allowed for, as

opposed to wasting time in traffic trying to get to class. Autonomy centers on the students' ability to learn at their own pace and set their own goals for their learning.

The second of the three dimensions, Co-participatory activities, covers the categories of *flexibility, reflection, quality, interaction, feedback, and collaboration*. While some of these categories are largely self-explanatory others are not. Tobin explains that within this dimension the mediating role of the teacher is important. The teacher helps structure the activities to allow students to approach them with their existing knowledge and gain new understandings and insights through interacting with the community of learners. Thus, flexibility refers to the need for the teacher to be flexible in the way in which students helped to reach their goals. Interaction centers on the students' abilities to interact with each other and the instructor and the students clearly valued both asynchronous and synchronous interactions. Thus, the instructor and instructional designers should strive to facilitate high quality interactions in both modes. On the issue of feedback Tobin stresses that feedback should be timely and from a variety of sources, including the teacher and peers.

The third and last of the three dimensions, Qualia, covers the six categories of *satisfaction, enjoyment, confidence, success, tedium, and frustration*. Enjoyment and satisfaction were mostly tied to the students' learning and ability to transfer new knowledge to their own classrooms. The on-campus meetings greatly facilitated the confidence, satisfaction and enthusiasm that students felt about each other and learning in this blended environment. Learning from each other at these meetings also helped fuel

their confidence. Tedium relates to the reliance of technology as the primary tool for learning and interaction. Apparently, the student's online interactions consisted mainly of posting critical reviews of readings and responding to other students' postings. This caused some boredom for the students. Similarly, technical problems caused frustration for students and Tobin stresses the need for a stable and dependable online learning management system. Lastly, some of the readings were too advanced for some students, so Tobin suggests that alternative readings are made available to the students.

From the preceding discussion it is evident that Tobin (1998) identified several issues and topics which students considered important in a blended learning environment. He did this without relying on any one particular theoretical framework which allowed him to create his own framework for measuring the quality of a blended learning environment. However, Tobin did not operationalize his list of dimensions and categories. That task was handled by Chang and Fisher (2003), who created the Web-based Learning Environment Instrument (WEBLEI), which was used in a modified form in this dissertation study. The WEBLEI is discussed in greater detail in Chapter 3.

Summary

This section described the history of BL and its use in academia. Several studies were discussed and the strengths and weaknesses of BL were debated. Likewise the quality of the sampled studies in the field of BL was evaluated and areas in need of improvement and further study identified. Finally, the framework for this dissertation study was discussed in detail. The focus now turns to the use of BL in the area of second language acquisition (SLA).

Considering that this dissertation study collected data from writing courses for non-native speakers of English it is necessary to investigate the use of BL for language learning purposes. Knowing the strengths and weaknesses of BL in relation to its use for language teaching will provide an important part of the picture and help identify the issues and topics in this area that must be taken into account.

Blended Learning in Second Language Acquisition

When one examines the issue of BL implementation for language learning one soon notices the interesting fact that using computers for language learning is nothing new at all. In fact, the field of Computer Assisted Language Learning (CALL) has been extensively researched since its inception in the 1960s. Since then, the field has expanded and matured while the technology used for language learning has developed from large text-based mainframe computers to personal computers and mobile handheld devices with internet connections (Hubbard, 2009). The 2009 *Modern Language Journal* Focus Issue on the “most salient themes and controversies” (Lafford, 2009, p. 673) in CALL today provides an overview of the breadth and depth of the field. In this issue various authors discuss topics and issues such as CALL research (Chapelle, 2009; Egbert et al, 2009), CALL technology use and authorship (Levy, 2009; Otto & Pusack, 2009), and the need for teacher training (Blake, 2009; Cummins & Davesne, 2009; Garrett, 2009; Levy, 2009; Otto & Pusack, 2009). These researchers conclude that CALL is very much alive and well as an independent field of research and together they provide a good overview of the history and development of CALL while also suggesting numerous avenues for future research.

Interestingly, Lafford (2009) discusses the normalization of CALL and various ways the field has had an impact on language learning in the United States. Lafford indicated that she and others would very much like to see “the complete normalization of technology-enhanced tools for language learning and research” (p. 691). However, she acknowledges Bax' (2003) point that CALL will only be normalized once it is “invisible, embedded in every day practice and hence ‘normalized’” (p. 23). Lafford (2009) then suggests various steps that can be taken to help normalize CALL, such as better teacher training and better administrative support for a strong CALL infrastructure involving hardware, software and tech support. She also suggested that these and other criteria should be used to “audit pedagogical practices in varied teaching contexts” (Lafford, 2009, p. 691).

What is interesting about these suggestions, is that they are made without ever mentioning blended learning. This despite the fact that the area of BL grapples with many of these same issues. Thus, some of the most prominent scholars in the field of CALL make no connection to BL. This, in turn speaks not only to the relative immaturity of BL within the area of language learning but also to the fact that BL is considered separate from CALL. This serves to shed some light on the relationship between CALL and BL. It has only been within the past decade that researchers have started to explicitly refer to the use of ‘blended learning’ for language learning purposes. Thus, as one sets out to examine the area of BL within language learning one must decide whether to support the view that all CALL research exemplifies BL (insofar as the CALL activities are integrated into a face-to-face (FTF) language course) or if it is only studies that explicitly mention BL which should be

considered. To further muddy the waters, the term ‘hybrid’ learning has also been used to refer to what we would today call BL. Based on a sample of recent studies it seems clear that most studies which aim to investigate issues in blended language learning contexts are forced to rely on research in the area of CALL, which does not even mention BL theories. For example, studies of the learner’s and teacher’s views of, or attitudes toward, BL (Sagarra & Zapata, 2008; Stracke, 2007; Wiebe & Kabata, 2010), BL implementation in language courses (Hong & Samimy, 2010; Neumeier, 2005), or learner outcomes in BL courses (Young, 2008) all draw substantially on CALL studies which they argue represent BL environments, despite the fact that BL is not mentioned in these studies. This further speaks to the relative immaturity of the field and helps reinforce claims such as “in the realms of BL there is still a lot of undiscovered territory to be explored and mapped out” (Neumeier, 2005, p. 176) and “notwithstanding BL’s popularity...L2 researchers remain confronted by substantial questions still not answered definitively” (Hong & Samimy, 2010, p. 329). For the purpose of this dissertation references to CALL research will be included to establish the usefulness and applicability of computers to language learning. However, for the discussion of the implementation of BL in language learning the focus will primarily be on studies that specifically mention BL. This helps focus the literature review while ensuring sufficient depth.

Next, the use of computers for teaching writing in the language learning classroom will be discussed from the perspective of CALL. Finally, BL implementation in language

learning courses will be discussed from the perspective of the issues and variables that have been investigated and those that still need attention.

Teaching writing in a CALL environment

Levy (2009) points out that with the spread of the personal computer “the word processor has undoubtedly become one of the most widely accepted technologies for writing” the central purpose of which is to “facilitate the flexible manipulation of text” for easy “drafting and redrafting” (p. 772). For example, Hegelheimer (2006) and Hegelheimer and Fisher (2006) described the interactive iWrite system that helps students improve their grammatical accuracy in writing. Likewise, Ho and Savignon (2007) described how the track changes function in Microsoft Word can be used for computer-mediated peer review via email. Chun (2008) also described how computer mediated communication (CMC) tools for language learning have moved from ‘first-generation’ email and text-based message boards and forums to blogs, wikis and social networking sites. In fact, one can argue that IRC chat and instant text messaging are rapidly being replaced by technologies such as Twitter and Facebook. Other examples include the use of blogs (Arslan & Sahin-Kizil, 2010; Ducate & Lomicka, 2008; Fellner & Apple, 2006) and student-designed web pages, wikis and PowerPoint presentations (Murray & Hourigan, 2006). In another example, Elola (2010) described and compared how students write individually and collaboratively using a wiki. In addition, Schulze and Liebscher (2010) described how computer technology was used to facilitate an intermediate-level hybrid German writing course which included “exchanges via

email, synchronous chat, and discussion boards" as well as "online study with interactive language exercises and other electronic materials" (p. 554).

Turning to the use of CALL to teach writing in a blended learning environment Grgurović (2010) discussed several blended learning studies in the area of CALL (Adair-Hauck et al., 1999; Barr et al., 2005; Chenoweth & Murday, 2003; Chenoweth et al., 2006; Echavez-Solano, 2003; Green & Youngs, 2001; Scida & Saury, 2006). These studies compared traditional face-to-face classes with classes that integrate computer-based or web-based activities as part of a language course (i.e. blends FTF and computer-based instruction). Grgurović (2010) described how learners of French, Spanish, and German, worked on the four skills (reading, writing, listening, and speaking) as well as grammar, vocabulary and culture during these studies. For most of these studies reported results showed no significant difference between the comparison and control groups on many of the measured outcomes. Some studies (Adair-Hauck et al., 1999; Barr et al., 2005; Chenoweth et al., 2006) did show performance advantages for the FTF control groups in some or all of the following skill areas: speaking, oral fluency, vocabulary, listening and reading, and grammar. However, their limited number prevents any generalizations to the greater community of learners. Most importantly, no control groups showed advantages over the BL groups in terms of writing. In fact, three studies (Adair-Hauck et al., 1999; Chenoweth & Murday, 2003; Chenoweth et al., 2006) showed significant differences in terms of writing that favored the blended learning groups.

The fact that writing can be taught in a blended learning environment is also supported by Miyazoe and Anderson (2010). Their study involved 61 EFL students at a university in Tokyo who participated in weekly FTF instruction and out-of-class online writing activities using forums, blogs and wikis. The authors found that the participants progressed in their ability to differentiate English writing styles and that they developed positive perceptions of the BL course. These results seem to suggest that CALL in general, and CALL in a blended learning environment specifically, can contribute to the teaching and learning of various kinds of language skills. According to the findings discussed above, blended language learning environments often produce learning outcomes similar to regular FTF environments, though some studies have shown an advantage for FTF environments with regards to teaching various language skills. However, the area of writing, which has been explored extensively in CALL research, appears to benefit from the technologies and activities available in a blended learning environment.

Having established the usefulness of BL for teaching writing in a language learning context the discussion now turns to how to implement BL in language learning and the different variables associated with this implementation. This will help focus the discussion and highlight some of the gaps in the literature.

Blended learning implementation in language learning environments

Several researchers debate the issue of how to successfully implement blended learning for SLA purposes (Coryell & Chlup, 2007; Hong & Samimy, 2010; Neumeier, 2005; Stracke, 2007). This debate exists because BL has been the focus in an increasing number of

research studies and has gained the interest of second language educators over the past decade (Hong & Samimy, 2010). Consequently, Hong and Samimy (2010) suggest that researchers look into the relationship among the various critical factors that are in play in this BL implementation process. One way to do this is to look at the intersecting variables. Table 2 lists ten representative studies that have looked at a number of variables associated with the implementation of BL in language learning. Examining these studies and variables in more detail causes several themes to emerge. The first two variables center on the students while the following seven center on the teacher and his or her training and application of pedagogy. The last two focus on the effects of using technology in a BL environment. Several of these themes and variables are central to this dissertation and will be discussed in detail below.

Student attitude and experience

Many researchers seem to agree that student attitude and experience is a key variable in the implementation of BL in language learning (Cartner, 2009; Coryell & Chlup, 2007; Hong & Samimy, 2010; Miyazoe & Anderson, 2010; Pennock-Speck, 2009; Sagarra & Zapata, 2008; Stracke, 2007; Wiebe & Kabata, 2010). Making sure that learners have a positive learning experience is a fairly basic tenet of most, if not all, academic learning environments. Three of the abovementioned studies deserve particular attention. In her study, which looks closely at why three students dropped out of a blended language learning environment at a university in Germany, Stracke (2007) found that students left for three main reasons: The FTF and online modes were not sufficiently integrated, there was a perceived

lack of paper-based materials and inflexible use of technology (a study CD-ROM was only available for on-campus lab use), and a negative view of computers and their efficiency for language learning. One should note, however, that the data for this study were collected in the latter half of the 1990s. Thus, the technology factor in the study was a self-study CD-ROM which is somewhat different from today's online language learning materials. Furthermore, the students were all adults who might not have grown up using modern computer- and communications technology from a young age, like most of today's learners. For example, Coryell & Chlup (2007) described how age is a factor in successful BL implementation and that it can be more difficult to get buy-in from older students. Nonetheless, similar perceptions were identified by Sagarra and Zapata (2008) who examined the attitudes of 245 second language learners of Spanish towards using an online workbook in a BL environment. In their study, most student participants had a positive view of the BL environment but also remarked on the factor that the course online textbook and audio CDs were not integrated in the course content management system. These students did acknowledge the "mutual relationship between class content and online materials" (Sagarra & Zapata, 2008, p. 218) which infers that teachers did a satisfactory job of linking the two. Finally, the students did not like how cumbersome it was to type codes on the computers to access characters with accents and diacritics. In the third study Cartner (2009) explored BL strategies for providing online access to academic word lists for 52 learners of English. BL was adopted with the specific aim of meeting student needs for more flexible access to the course materials. She found that this environment appealed to a cross-section of the learn-

ers who developed positive attitudes and commented favorably on the learning benefits that followed the flexibility of online access to the learning materials.

Table 2. Overview of blended learning studies and the variables they identify and investigate

Variables identified or investigated in BL environments	Studies
Student attitude and experience	Cartner (2009), Coryell & Chlup (2007), Hong & Samimy (2010), Miyazoe & Anderson (2010), Sagarra & Zapata (2008), Stracke (2007), Wiebe & Kabata (2010)
Student computer literacy skills	Coryell & Chlup, (2007), Hong & Samimy (2010)
Teacher attitude	Coryell & Chlup, (2007), Wiebe & Kabata (2010)
Teacher training and support	Coryell & Chlup, (2007), Hong & Samimy (2010), Young (2008)
Teacher effect on student attitude	Wiebe & Kabata (2010),
Teacher effect on learner outcomes	Sanprasert (2010), Wiebe & Kabata (2010), Young (2008)
Positive effect for students being encouraged by teacher to use online environment	Wiebe & Kabata (2010)
Positive effects on learner autonomy	Pennock-Speck (2009), Sanprasert (2010)
Assessment pros and cons	Miyazoe & Anderson (2010), Pennock-Speck (2009)
Technology issues and problems	Cartner (2009), Coryell & Chlup, (2007), Sanprasert (2010), Young (2008)
Technology accommodated access to materials outside of class	Cartner (2009), Sagarra & Zapata (2008), Sanprasert (2010)

Student computer literacy skills

Turning to the issue of student computer literacy skills Hong and Samimy (2010) found, in their study involving 244 undergraduate EFL students, that students with higher computer literacy skills were more likely to have a positive view of CALL. These findings are

confirmed by Coryell and Chlup (2007) whose survey of adult English language learner programs across the US gathered data from 15 instructors and 4 program directors. They found that needs assessment for technological skills were useful and that some learners were both computer-inexperienced and often fearful of using technology for learning.

In summary, research indicates that when using a blended learning approach instructors need to make sure that the technology and online materials are well integrated into the course, easy to use, and user friendly. Also, students who are not familiar with computers may need extra help in order to benefit from a blended learning environment and gain a positive attitude about using technology for learning. However, it is also clear that the rapid development of educational technology has an impact on the usability and ease of use of tools such as computers. Thus, research in the area may age faster and lose some of its relevancy, which researchers must keep in mind.

Teacher training and support

The different variables that were identified with regards to the teacher are more varied than those for the students. This reflects how critical the teacher's role is in a blended language learning environment. It is interesting and important to note that with the exception of 'teacher BL environment attitude,' the rest of the variables involve pedagogy and technology (see Table 2).

Coryell and Chlup (2007), in their survey of adult English language learner programs across the U.S., made it very clear that instructor professional development and support in terms of pedagogy and technology were both considered keys to successful BL programs.

Thus, teacher training and support is of paramount importance when one seeks to implement BL in a language learning environment. In spite of this, only three studies discuss this aspect, (Coryell & Chlup, 2007; Hong & Samimy, 2010; Young, 2008;). A closer look at these studies provides more details and insight.

Coryell and Chlup (2007) found that, besides teacher training and support, collaboration among administrators, instructors, and tech support personnel were also considered very important for successful implementation of BL in language learning courses. Instructors were found to need not only technical support, but also professional development in areas such as hardware, software, technical troubleshooting and integration strategies for instruction. Young (2008), reports similar findings from a study involving 209 university-level students in an intensive one-semester Spanish review course. She observed that learning efficiency could be significantly improved by using talented and/or experienced personnel, together with a change of pedagogical approach enabled by the affordances of the BL environment. Young also identified various technology issues and suggested that teaching personnel needs faculty and administrative support together with "professional development and training in both teaching and technology" (p. 176) in order to ensure a positive BL experience for teachers and students. Finally, Hong and Samimy (2010) examined the effect of teachers' use of CALL modes (features and activities) on student attitudes towards these modes in a BL environment. They noted that teachers should be given support and training because successful implementation cannot be guaranteed by relying on teaching experience or computer technology skills. In addition,

they noticed that students with higher computer literacy skills were more likely to have a positive attitude to the CALL modes. Lastly, they found that teachers needed training to understand the possibilities of BL environments for second language teaching. Closely connected to the issue of teacher training and support is the issue of the teacher's attitude toward teaching in a BL environment.

Few of the representative studies in Table 2 focus on what the teacher thinks of a blended language learning environment. Of the three studies in the table that touch upon the topic (Coryell & Chlup, 2007; Pennock-Speck, 2009; Wiebe & Kabata, 2010) two merely mention the importance of instructor buy-in and acceptance (Coryell & Chlup, 2007) and how technology implementation should keep teacher accommodation in mind (Pennock-Speck, 2009). Only one (Wiebe & Kabata, 2010) set out to specifically examine how educational technologies affects the attitudes of teachers and students. They found that the instructors in their study generally had a positive attitude towards the role of CALL materials and positive perceptions about the usefulness of instructional technology. All instructors also felt that using instructional technology increased their instructional effectiveness. The paucity of research in this area indicates a gap in the literature on BL implementation in language learning environments. The lack of research on how teachers perceive a blended language learning environment also touches upon another variable that will be investigated in this dissertation, namely how well teachers feel they were prepared pedagogically and technically and supported during the semester. This issue will also be addressed in this dissertation study and will be discussed in more depth in the section of

the literature review that deals with teacher training and support. Considering the importance of the teacher, it is not surprising that he or she has an important effect on learner outcomes and skills, which the findings of the following three studies illustrate.

Wiebe and Kabata (2010) reported that instructors influenced the students' perceptions of the use of CALL materials in a course. This study involved 183 students and 7 instructors of Japanese at a Canadian university. Their data indicate that instructor encouragement to use the online CALL materials helped increase student performance and participation, as long as they were judiciously placed. In fact, it had no positive effect that one instructor repeatedly mentioned the online course materials while centering on the mechanical aspects. Instead, the authors suggested that instructors keep a pedagogical focus in mind when calling student attention to available online materials. This aligns very well with Kaleta, Skibba, and Joosten's (2007) research findings and advice on how to deliver BL courses. Among other things, they point out that FTF and online activities need to be carefully integrated and that activities in either mode must be developed based on their pedagogical qualities. This will be discussed in more detail in the teacher training section of this literature review. In addition, Young (2008) found that in-class pedagogy and the pedagogical effectiveness of the instructor had a profound effect on student learning. Her study had two separate implementations of the BL materials in which the first phase used the "most pedagogically informed instructors" whereas the second phase used graduate teaching assistants and instructors with more varied skill levels. What they found was that well-trained and pedagogically well-prepared instructors teaching a redesigned course

could produce the same learning results in a 2-day a week course as others could in a 3-day a week course. In addition, Sanprasert (2010) investigated how learner autonomy could be fostered in a BL course involving 55 students that integrated a content management system into a FTF English class. He found that the CMS promoted learner autonomy on four aspects: perception, behavior, strategy, and interdependence. Sanprasert concluded that teacher initiatives are the prime factors in the development of learner autonomy.

In summary, we can conclude that teacher training in pedagogy and technology, together with administrative and technical support, play an important role in the success of blended language learning programs. Not only does it mean students may be able to learn the same materials faster, it may also have a positive effect on learner autonomy and learner perceptions about a course. In short, the teacher is vital for a successful implementation of blended language learning. Teacher training and support will be discussed in more detail in a separate section below.

Blended Learning Project Planning

Before turning to a discussion of some methodological issues with the studies discussed above it is worth taking a closer look at Pennock-Speck's (2009) study. In this study, which describes how blended learning was planned and integrated into English courses at a Spanish university through the use of a learning management system, the author outlines various factors that were considered during the implementation process. These factors are expressed by the establishment of some conditions for the use of information and communication technology (ICT) at the outset of the project. The first two

conditions were that it should “not be too time-consuming for teachers to design and put into practice activities and methodologies dependent on new technologies, nor should it involve an inordinate workload for the students” (Pennock-Speck, 2009, p. 174). The third and fourth conditions stated that it “should not be too expensive” and that it should only be used if it “would improve our teaching practice or give students more opportunities to acquire the knowledge and competencies they need” (p. 174). While these conditions seem straight-forward and maybe even self-evident they are not mentioned in any of the others studies that have been discussed. Consequently, one is left to wonder if the other studies undertook BL implementation without establishing any criteria or goals beforehand. The reason these conditions are interesting and relevant to this dissertation study is that the first two have a direct bearing on teacher and student attitudes to BL while the latter two address administrative and pedagogical issues. With the exception of the administrative issue these conditions are central to this dissertation and are all reflected in the teacher training materials that were created based on Kaleta, Skibba, and Joosten’s (2007) study findings on how to discover, design and deliver blended learning courses. When only one study explicitly states these conditions it highlights the fact that even if other studies considered something similar, their project descriptions are, at best, incomplete. In fact, it is conceivable that some of these studies of BL implementation in language learning contexts were undertaken without clearly considering these and other similar conditions, which are very important factors in the success of BL courses, according to Kaleta, Skibba, and Joosten

(2007). This, in turn, brings us to the issue of the lack of methodological rigor in most of the above-mentioned studies and the resulting difficulties on how to compare results.

Methodological issues and limitations

Though there are exceptions, Hong and Samimy (2010) found that most studies in the area of blended language learning lack methodological, analytical, and contextual rigor. For example, most studies are either small qualitative case studies with limited generalizability (e.g. Stracke, 2007) or large sample groups in which data are collected with survey instruments for which no reliability or validity data is given (e.g. Sagarra & Zapata, 2008). Similarly, even when the number of participants would allow for inferential statistics to be used, descriptive statistics often constitute the majority of the data analysis with somewhat sparse use of inferential procedures (e.g. Cartner, 2009; Wiebe & Kabata, 2010). Thus, Young (2008) stated that a majority of CALL research is not empirically based. These problems raise issues of replicability, comparability and application to the general population of learners. This dissertation study seeks to address some of these issues through the use of established, validated and reliable instruments, a mixed-methods approach that allows for triangulation of data, and a detailed, research-based approach to issues such as teacher training.

Summary

In sum, several student factors play significant roles in the implementation of BL in language learning contexts. Student attitude and experience are two key variables that highlight the fact that online materials must be user friendly and easily accessible to stu-

dents. Student computer literacy is also an important factor that teachers must consider. Various teacher factors also affect the quality of blended language learning environments. Thus, adequate teacher training and support in areas of pedagogy and technology is imperative. It also became clear that instructor buy-in and acceptance are important and that instructor behavior can affect students' perceptions of BL environments as well as their learning. In addition, most studies appear to lack methodological, analytical and contextual rigor. Included in this is the omission of specific criteria or conditions for the application and implementation of BL in many studies. In other words, it appears as if BL was introduced without much thought to the reason why or without clear goals for the instructional improvement that the researchers or teachers were supposedly trying to realize.

Teacher Training and Support

This section discusses the issue of teacher training and support based on a review of relevant literature from the fields of language teacher education and general teacher education. It is argued that teachers need both pedagogical and technical training together with ongoing support in order to be able to teach in a blended learning environment.

Teacher training

A review the literature from the area of CALL clearly shows that teachers are generally not sufficiently prepared to teach with technology (Abras & Sunshine, 2008; Compton, 2009; Hubbard, 2008; Jones & Youngs, 2006; Kessler, 2006; Lafford, 2009;

Reinders, 2009). It appears that many language teacher education programs approach CALL with a focus on hardware and software. Kessler (2006) describes how the instruction seems to predominantly focus on digital literacy or orientation about specific software programs such as Microsoft PowerPoint. This results in language teachers graduating with little or no knowledge of how to use technology for language teaching (Hubbard, 2008). This is the case whether the approach is online, distance, or hybrid language courses (Abras & Sunshine, 2008; Jones & Youngs, 2006). This problem is not only evident from the perspective of the researcher but also to in-service teachers. Kessler's (2006) study of 240 graduates of North American TESOL master's degree programs highlighted the fact that many in-service teachers are generally dissatisfied with the very limited CALL training in their programs. The training they did receive often centered on digital literacy training which meant that many teachers interested in CALL ended up resorting to self-directed learning to satisfy their learning needs. This state of affairs is regrettable as there is a "clear demand for technology-proficient language instructors" (Hubbard, 2008, p. 177). Thus, knowing how to teach language with the assistance of technology requires pedagogical knowledge.

Several researchers agree that CALL training has neglected the pedagogical aspect of technology implementation into language learning (e.g. Compton, 2009; Hubbard, 2008; Kessler, 2006, Reinders, 2009). In the words of Reinders (2009) "knowing how a program works does not equate to knowing how to use it in a teaching situation. This is where the technical focus shifts to a pedagogic one" (p. 231). This is supported by Kessler (2006) who states that "the utilization of CALL requires an intimate and extensive knowledge of

technology that is pedagogically focused and informed by the literature” (p. 26). Thus, it is generally recognized that CALL teacher training needs to be improved through a focus on the pedagogical and technical skills teachers need in order to be able to plan and teach successful online or blended language courses (Chapelle & Hegelheimer, 2004; Davis & Rose, 2007; Jones & Youngs, 2006; Kaleta, Skibba & Joosten, 2007; Oxford & Jung, 2007; Slaouti & Motteram, 2006).

One such set of technical and pedagogical skills was proposed by Hampel and Stickler (2005), who constructed a pyramid of skills or competencies in which each level builds on the previous one. They devised this list based on their own experience training online tutors and teaching languages synchronously online. The list includes skills such as basic ICT competence, dealing with the constraints and possibilities of the medium, and online socialization. Various empirical studies provide examples of how teacher acquisition of these and other skills can help solve technical and pedagogical problems and improve the learning environment. For example, Cartner (2009) described a study lasting two semesters in which the instructor’s increasing expertise in creating online content enabled more focus on the online course interface to minimize technical problems. Likewise, Vaughan (2010) described how a BL course was significantly improved by being redesigned with a focus on alignment of learning outcomes, assessment activities and the use of technology, all of which require theoretical and practical pedagogical skills. Therefore, it is safe to say that technical and pedagogical teacher training is necessary when one attempts to effectively implement BL in language learning courses. However, Hampel and Stickler (2005) do not

focus specifically on BL teacher training. Consequently, since BL is significantly different from purely online or FTF learning a BL teacher training program needs to consider both modes and the interaction between the two.

Kaleta, Skibba, and Joosten (2007) describe what such a BL teacher-training program should contain and how it can be carried out. Their advice builds on the findings of a qualitative research study that investigated the BL teaching experiences of 10 faculty members from three universities. In their discussion they outline how faculty in BL environments have to assume various roles that may be new to many instructors. Specifically, they identified four roles that have both online and FTF components: 1) pedagogical, 2) social, 3) managerial, and 4) technological. For each, they describe how to prepare faculty for this new or modified role and explain in detail the central aspects of the role. For example, they describe how the instructor's pedagogical role is likely to change in terms of teacher-learner relationships and as a result of the need to re-examine course goals and objectives. In addition, many instructors end up putting too much content in their courses. In their conclusion they summarize their suggestions on how to prepare university faculty to teach BL courses in two lists. One list outlines how faculty developers can plan and prepare a BL teacher training program. The second list covers the "primary issues and topics, which should form the core of any program preparing faculty for hybrid teaching" (Kaleta, Skibba, & Joosten, 2007, p. 138). Refer to Appendix C for this second, twelve-item list, which constituted the majority of the content for the teacher training carried out in this study. In addition to these suggestions, Roschelle, et al. (2000) list four fundamental

characteristics of how students learn, which may be supported with technology: "(1) active engagement, (2) participation in groups, (3) frequent interaction and feedback, and (4) connections to real-world contexts" (p. 76 [abstract]).

Finally, Hofmann (2006) points out that teachers must not neglect the online parts by treating it as an add-on to the FTF classes. Otherwise, they risk that learners will value only the FTF meetings and see the online activities as optional or unimportant. Thus, it is necessary to "reinforce the blend, so that participants understand the importance" (Hofmann, 2006, p. 35). These suggestions should all be part of the training teachers receive in preparation for teaching BL courses. However, researchers also debate how such a training course should be taught.

Researchers in the field of BL teacher training acknowledge that different situations and circumstances necessitate different approaches to teacher training in BL technology and pedagogy skills (Hubbard, 2008; Hubbard & Levy, 2006b; Kaleta, Skibba, & Joosten, 2007; Reinders, 2009). Hubbard (2008) provides an in-depth discussion of the various approaches for training CALL teachers, such as situated learning, project-based learning, and separate courses focusing on broad or in-depth knowledge of CALL. Reinders (2009) also discusses various options and their applicability to different situations. While he supports the use of a separate, formal technology course for teachers he also points out that this may only be feasible in contexts such as masters courses. Instead, for in-service teachers, he recommends that schools support informal networks among their teachers "through the provision of resources and by recognizing such staff for their contributions" (p.

233). Despite the fact that it may not be possible in all in-service settings, Kaleta, Skibba, and Joosten (2007) and Hubbard (2008) both suggest that an in-depth course be used first in in-service settings. For example, Kaleta, Skibba, and Joosten (2007) suggest to start the training “at least six months prior to the time instructors will be teaching their first hybrid courses” (p. 138). Hubbard (2008) then suggests following up the course by encouraging the teachers to form a community of practice (Lave & Wenger, 1991; Wenger, 1998) to support learning about CALL. This will encourage the learners (in this case the instructors) to connect with and support each other while working with the expert. Considering the many possible settings in which faculty may need to be trained in BL technology and pedagogical skills trainers will have to adopt an eclectic approach. This approach will need to take into consideration the technical and pedagogical skills of the faculty and the available time.

However, the aforementioned sources provide a good starting point based on solid empirical and theoretical data and constitute the primary sources used for the instructor training in this dissertation study. This training is described in detail in Chapter 3. Returning for a moment to Hubbard’s (2008) recommendation to use a community of practice for in-service teachers, this brings up the issue of ongoing learning and support. The next section discusses teacher support in greater depth.

Teacher Support

Providing BL teachers with technical and pedagogical support is very important for the success of BL courses. While teacher (and student) support is somewhat similar to teacher training, many of the aforementioned teacher training resources (e.g. Compton,

2009; Hubbard, 2008; Kaleta, Skibba, & Joosten, 2007; Kessler, 2006) fail to mention it.

However, several sources in the field, particularly empirical studies, recognize the need for ongoing instructor support (e.g. Coryell & Chlup, 2007; Davis & Fill, 2007; Dziuban, Hartman, Juge, Moskal, & Sorg, 2006; Hoffman, 2006; Moore & Gilmartin, 2010; Vignare, 2007; Young, 2008). Ongoing support may be both pedagogical and technical in nature though the latter is most frequently mentioned. For example, Dziuban et al. (2006) state that having technical specialists ready to support faculty and students when things inevitably go wrong is critical for the success of BL courses. Their advice carries significant weight because it builds upon experiences from hundreds of BL courses offered at University of Central Florida since 1997. Davis and Fill (2007) also stress the importance of being able to provide teachers and academic schools with support when they need it. They stress both the pedagogical and technical role of this support and suggest having a dedicated learning technologist available who can act as an agent of change. Likewise, Young (2008) describes how faculty and administrative support is critical to learner outcomes. From a business training perspective Hoffman (2006) also stresses the fact that having a “well-prepared facilitation team” that can “support all aspects of the blend” (p. 37) is very important. This allows the teacher or trainer to focus on the teaching and delegates other support issues to those on the team that are best equipped to handle them. Consequently, it is clear that providing faculty and students with pedagogical and technical support during the semester is a critical factor for the success of BL programs, which should not be ignored or neglected.

Summary

This section discussed the issue of teacher training and support based on a review of relevant literature from the fields of language teacher education and general teacher education. It was discussed how many teachers, particularly language teachers, graduate without sufficient knowledge of how to teach with technology. Pedagogy, in particular, seems to be neglected in the area of CALL training. Consequently, various options for teacher training in technology and BL pedagogy were discussed, including dedicated courses and communities of practice with ongoing support. The issue of support was also debated and while not all theoretical studies address this issue, many empirical ones do. They make it clear that ongoing pedagogical and technical support is critical to the success of BL courses. The conclusion is that faculty trainers must take an eclectic approach when developing their training programs and seek to include ongoing training and support while trying to encourage the creation of a community of practice among the faculty.

Chapter Summary

This chapter presented and discussed the literature that forms the base for this dissertation study. First, the literature on the use of BL in higher education was reviewed, which included a definition of blended learning, and a discussion of several findings related to BL use in higher education. Among other things, it was found that BL can improve learning outcomes, student motivation, and classroom dynamics while being more flexible than purely FTF or online instruction. This section also outlined the conceptual framework for this study, which is based on Tobin (1998). Next, the literature on the use of BL

environments for foreign language instruction was reviewed. It was concluded that writing has been taught successfully with computers for decades. Then, several studies on the use of blended language learning environments were discussed and a number of different variables that may affect the effectiveness of these environments were identified. Some of these variables center on the students and include student attitude, experience, and computer literacy skills. Other variables center on the teacher and include teacher attitude, pedagogical and technical training, and support. Finally, the research questions were introduced. The next chapter explains the study's research design including the research context, the materials and activities, the participants, the data collection techniques and materials and the analytical procedures.

CHAPTER 3: METHODOLOGY

Introduction

In this chapter, the research design of this dissertation study is outlined in detail. The research methodology section describes the pragmatist worldview of the researcher and provides a detailed rationale for the choice of a mixed methods approach to data collection including the individual qualitative and quantitative aspects of the study. Following this is a description of the research context, participants, and data collection techniques and materials. Finally, the research and data analysis procedures are described and the chapter concludes with a summary.

Research methodology

In this mixed methods dissertation study the philosophical worldview is that of pragmatism. Based on Creswell (2009) and other various sources (Cherryholmes, 1992; Morgan, 2007; Patton, 1990; Rossman & Wilson, 1985) the pragmatist world view “arises out of actions, situations, and consequences rather than antecedent conditions (as in postpositivism)” (Creswell, 2009, p. 10). Rather, the focus is on applications and solutions to problems. Thus, it is a fitting philosophical underpinning for a mixed methods approach where “inquirers draw liberally from both quantitative and qualitative assumptions” (Creswell, 2009, p. 10) in their research. Quantitative and qualitative data are used “because they work to provide the best understanding of a research problem” (p. 11). Such an approach to research matches well with the world view of the researcher. I believe real

world problems are best solved by determining the needs and wants of everyone involved and then identifying the best solution based on the knowledge, materials and skills available at the given time. This should be seen in relation to a rigid theoretical or prescriptive approach that frequently needs to conceptualize or ‘massage’ a problem to make it fit the proposed solution or method of inquiry.

A mixed methods approach, by definition, combines aspects of quantitative and qualitative approaches. Thus, this dissertation study primarily employs a descriptive, quantitative approach that utilizes cross-sectional survey research to elicit the perceptions of the learners and teachers about their experiences learning and teaching in a blended learning environment. However, as useful as a quantitative approach is, it also has its flaws. In response to this, various aspects of qualitative research methodology were used to collect additional data. These data were collected in the natural setting of the writing classes and observations and interviews were used to provide additional, detailed information in the own words of the participants. This approach is a “concurrent embedded strategy” which is “identified by its use of one data collection phase, during which both quantitative and qualitative data are collected simultaneously” (Creswell, 2009, p. 214). Furthermore, “a concurrent embedded approach has a primary method that guides the project,” in this case quantitative questionnaires, “and a secondary database that provides a supporting role in the procedures” (p. 214), which in this case is the qualitative data obtained through learner and teacher interviews and observations. In this study, “the

mixing of the data from the two methods” is used to “integrate the information and compare one data source with the other” (Creswell, 2009, p. 214).

The quantitative data from this study was collected using the student post-questionnaire which consists of a modified WEBLEI questionnaire (see Appendix I) and several additional questions that elicit student perceptions of the blended learning environment. Data from each of the survey sections were coded according to their Likert scales responses. For example, the WEBLEI scales are measured using a scale of 1 (Almost Never), 2 (Seldom), 3 (Sometimes), 4 (Often), and 5 (Almost Always). Statistical measurements such as mean, median, standard deviation and Cronbach alpha reliability were calculated.

The qualitative data for this study were collected through student and teacher interviews, observations of teacher planning meetings, and classroom observations. The collection of this data complemented the quantitative data very well and provided important additional insight into the students’ and teachers’ experiences. It also enabled triangulation of the quantitative results.

In summary, the specific research methodology outlined above provides the best way of collecting rich, detailed data on the student participants’ opinions about learning within a blended learning environment. It also allows for a comparison of the influence of the individual teachers on their respective classes. Furthermore, the teacher questionnaires, interviews and observations of planning meetings provide quantitative and

qualitative data on the teachers' opinions of the transition process to teaching a blended learning course and their experience teaching within the environment.

Research context

The following sections describe the research context of the study including the program itself, the courses, the paper-based and online materials, and the classroom and lab activities.

The intensive English program

Data were collected in an intensive English program (IEP) in a large Midwestern university in the United States. In the Fall 2010 and Spring 2011 semesters in which data collection took place the program had 200 and 150 students enrolled, respectively. Thirty-two instructors and teaching assistants were employed to teach these students during the Fall semester and 31 in the Spring. Students generally enroll in the program to achieve sufficient English proficiency to pass the English language admission requirements in their desired programs. Most students take the Test of English as a Foreign Language (TOEFL) to demonstrate their proficiency. Some take the institutional TOEFL, which is paper-based, while others take the internet-based Test (IBT). Some students also take the International English Language Testing System (IELTS) test. Prior to Fall 2010, most students in the IEP were students who had been conditionally admitted to the university. The condition was that they had to pass the TEOFL test. Many students did not get a sufficiently high score to start university coursework and unexpectedly ended up in the IEP. According to the director

and many of the teachers in the program this resulted in various problems: Student were disappointed they had failed the proficiency test and wanted to pass it as soon as possible. Besides various behavioral problems this meant that many students would regularly skip classes to study for the test, which can be attempted once a month, and question or criticize course content that was not directly related to passing the test. As a result, the course materials and approach, which will be described later, was partly developed with this type of student in mind; a student who is unmotivated and who tends to focus more on passing the proficiency test than learning the kinds of academic writing skills he or she will need for college study in the US. However, the university was aware of this problem and instituted significant changes before the beginning of Fall 2010.

According to the program director, beginning with Fall 2010, the university significantly limited the amount of students who were given conditional admission. Now, many of those who had not passed the proficiency test prior to applying were only offered visas for English study. Thus, if they chose to come, they knew from the beginning that they would have to study in the IEP. This change, combined with a more strict policy on absences and grades, resulted in fewer problems during Fall 2010 and Spring 2011, compared to previous semesters.

The IEP is divided into six proficiency levels (1 through 6), for each of the four language skills (reading, writing, listening, and speaking). Level 1 students, of which there are generally very few, are beginners while level 6 students are the most advanced. While it is difficult to generalize, many students enter the program at a level 3 or 4 in reading and

writing and typically need one or two semesters of intensive English study to pass the proficiency test. Students are often able to pass the proficiency test when they reach level 5. However, a student may be level 4 writing and level 6 speaking and thus experience being held back by a lack of proficiency in a specific area. Consequently, it is difficult to say exactly at which level a student can pass his or her proficiency test. Another reason for this is that students often need different test scores depending on the program they want to enter.

The program is staffed with both native speakers of English and international graduate students. The full-time instructors all have at least an MA degree in an area related to teaching English as a second or foreign language while many of the teaching assistants are working on either their MA or PhD degrees in the Applied Linguistics program or on PhD degrees in areas such as multicultural education.

Most instructors have at least a basic familiarity with learning management systems such as Moodle and WebCT, both of which are available to them for teaching their courses, if they wish to use them. Basic technical support is available to the teachers if they have problems with their learning management systems but there is no organized pedagogical support for online learning. All teachers are scheduled one class a week in a computer lab for each of their courses. Teachers are generally encouraged to support each other in matters of pedagogy and instructional approaches and methods while the program offers organizational support and instructional support in the form of teaching materials. Many classes are also scheduled in multimedia-enhanced classrooms that allow the instructors to play audio or video for the students and hook up a laptop to a projector.

Writing level 4 and 5 courses

The writing courses typically focus on academic writing skills to prepare students for college courses. The course book is determined by the program and two different books are alternated between semesters. This way, students who have to repeat a level do not study the exact same content in both semesters. Each level has a specific set of learning *outcomes* that teachers must teach and assess. At the end of the semester students are rated on their mastery of the outcomes; they generally need to reach at least 75% for each in order to advance to the next level. The writing level 4 and 5 outcomes are listed in Appendix D.

Paper-based course materials

The teachers used various kinds of materials to teach each section of the course. The primary material used for each course was the assigned textbook, which the students were required to purchase. While not all chapters were relevant to the five outcomes that students should master by the end of the course, most were used to some degree or another. In addition, the teachers also used parts and exercises from other ESL books and shared various worksheets from previous courses they had taught or they created new worksheets specifically for this course.

Online course materials

The online materials were presented to students within the learning management system (LMS) Moodle (Modular Object-Oriented Dynamic Learning Environment). Moodle is “a global development project designed to support a social constructionist framework of education” (About Moodle, para. 1). As an educational tool, the possibilities with Moodle

span from using “the activity modules (such as forums, databases and wikis) to build richly collaborative communities of learning around their subject matter” to delivering “content to students (such as standard SCORM packages) and assess learning using assignments or quizzes” (What is Moodle?, Para. 5). SCORM stands for Sharable Content Object Reference Model and is a format for preparing online content, which is compatible with a range of learning management systems. For this study, the teachers each had their own course created in Moodle. Within these courses, each teacher conducted forum discussions, administered quizzes and assignments, and provided links to external online resources that the students had to study. The external online resources were typically websites with information and exercises related to the course outcomes such as The Purdue Online Writing Lab. The teachers communicated with the students online by replying to their forum postings and by sending them email messages through Moodle. Within Moodle, the teachers quickly discovered the ability to share activities and materials and proceeded to share various worksheets and exercises together with quizzes and assignments. The materials developed by the participating teachers were not used in any other courses.

The training given to the teachers at the beginning of the semester stressed the integration of the regular face-to-face classroom environment and the online environment and teachers often had the students work across the two environments. For example, students would be asked to prepare a paper outline for an essay during regular class and then have to write and submit the essay online via Moodle during lab class. In Moodle, the teachers also used their course front pages, which listed the semester weeks in

chronological order, to give students directions about their weekly and daily activities such as assignments and homework.

Classroom and lab activities

The classroom and lab teaching carried out by the teacher participants was fairly uniform. In the regular classroom the teachers typically worked with the course book and various handouts. The interaction involved individual work and pair- and group work and the teachers often made use of the chalkboard. Teachers would also occasionally make use of overhead projectors or computer projectors, with the latter used fairly frequently by the male teacher and less frequently by the female teachers with one female teacher never being observed using the projector, because her classroom was not equipped with one. Some observed classroom lessons were heavily teacher-fronted though the level of student interaction and involvement was always substantial. For example, a teacher would be going over an issue or topic with his or her students and writing down their suggestions on the board.

In the computer labs the teaching was fairly uniform across the five teacher participants. After three to four weeks, in which the students got used to the routine, the teachers settled on providing written directions for each lab class on their Moodle course homepages. Thus, teachers would typically open the day's class with a few announcements and then direct the students to the course Moodle front page where they would have to follow the step-by-step directions for the day's class. The teachers would often either move around the room to observe the students' work progress or sit at a computer, in a central

position in the lab, from which they could observe the students and see if anyone raised their hand for help. Most observed lab classes had the students working individually on exercises, assignments or quizzes, with very little verbal pair- or group work. However, students frequently peer-reviewed each other's writings online during the class period and posted these reviews in online forums.

Participants

The following section contains descriptions of the teacher and student participants in the experimental and control groups. For information about the blended learning training that student and teacher participants in the experimental group were given at the beginning of the semester, please refer to the Procedures section.

Experimental group students

The student participants were 41 English as a Second Language (ESL) students whose age span ranged from 18 to 46 years of age ($M = 21.66$, $SD = 5.05$). There were 27 males (65.85%) and 14 females (34.15%) who participated. The participants' native languages included Chinese (35 participants = 85.37%), Arabic (3 participants = 7.32%), Korean (1 participant = 2.44%), Chilean (1 participant = 2.44%), and Indonesian (1 participant = 2.44%). The participants' number of years of English study prior to participating in the study ranged from 1 to 16 years ($M = 8.43$, $SD = 3.02$). All participants were enrolled in intensive English writing courses at either level 4 (26 Participants) or level 5 (15 Participants). The participants were selected for this study on the basis of their enrollment in these classes

and their corresponding proficiency in English. While not completely uniform, students in writing level 4 and 5 classes were presumed to have sufficient listening, speaking and reading skills to be able to understand the written consent forms and oral and written directions given by the researcher and the teachers throughout the course.

Experimental group teachers

The teacher participants were 5 ESL teachers (3 females and 2 males) employed in an Intensive English Program (IEP). One teacher taught two of the courses, a level 4 and a level 5 course, while the rest of the teachers each taught one course. Their ages ranged from 25 to 48 years of age (mean age = 33 years, 7 months, std. dev. = 8.82). All teachers were native speakers of American English. Their highest level of education were MA degrees in Teaching English to Speakers of Other Languages (TESOL), with one teacher (Ann) having an MA in Applied Linguistics. Their teaching experience ranged from 3 years to 10 years and all teachers had prior experience teaching writing. None of the level 4 teachers had taught this level before, while the level 5 teachers had both taught level 5 Writing before.

The teacher participants' experiences with using technology for teaching varied somewhat. All of them had experience using computers to teach writing. Typically, teachers in this program have one lab day a week with each of their classes. However, none of the teachers had extensive experience using Moodle for teaching. Two of the female teachers (Ann and Jennifer) seemed a little more comfortable using Moodle than the other three teachers and explored such functions as the grade book and the quiz feature on their own

to the point where they could use them in their courses. The other three teachers (Jim, Sandra, and Harry) took a slower approach and had the researcher conduct workshops on these two tools, after which they slowly started using them more. Two of the five teachers had some experience using blended learning prior to participating in this study: Sandra participated in a blended learning study with a focus on listening and speaking conducted by another PhD student one year earlier. However, this study used a specific online environment that was tied to the course textbook and developed by the textbook publisher. Consequently, this teacher did not have any more experience using Moodle for blended learning than the other teacher participants and did not give evidence of any prior knowledge of blended learning pedagogy. Harry indicated on the background questionnaire that he had always used an online component in his classes and that online activities typically involved “assignments, group work, exercises, etc.” (Harry, background questionnaire). Nonetheless, judging from his reactions to the BL training session and his behavior during the semester Harry did not appear to have greater knowledge of BL theory and pedagogy than any of the other teachers.

Control group students

The data from the students in the control group were gathered anonymously and consisted of student grade reports. The control group consisted of 21 level 4 Writing students and 33 level 5 Writing students. As a result of the anonymous data collection, very limited demographic information was collected. For this reason, data such as age, gender, and native language was not available. However, based on information gained from conver-

sations with teachers in the intensive English program, the group was similar in composition to the experimental group. The control group did initially include about 20 Indonesian students spread out among the individual classes. However, they were eliminated from the data because of significant differences from the other students. Among other things, the Indonesian students only joined their classes for approximately 8 weeks of the semester and received special, non-standard grade reports. In terms of English proficiency the extensive placement testing done in the intensive English program prior to the beginning of each semester ensured that students placed together in either writing levels 4 or 5 all had very similar writing performance.

Control group teachers

No data were collected about the control group teachers. However, the intensive English program requires all instructors to have at least an MA degree in linguistics. Most also have several years of ESL and EFL teaching experience. None of the control group teachers are believed to have any formal training in blended learning pedagogy or technology integration. This is supported by the fact that for the Fall 2010 semester only the four teachers involved in the study had received BL training or expressed interest in learning about it and participating in the study. In addition, while more teachers became interested in BL for Spring 2011 semester, due to the enthusiasm of the first four teachers in the study, none of these teachers taught level 4 or 5 writing classes. Jennifer and Ann, who participated in the Fall 2010 semester data collection, did teach level 4 writing classes again

in Spring 2011 semester. However, their classes were excluded from the data, since they continued to use BL and therefore did not fit into the control groups.

Data Collection Techniques and Materials

This section describes the data collection techniques employed in this study and the individual instruments used to gather the data. First, student pre- and post-questionnaires and interviews will be discussed. Included in this discussion are also the modifications and additions to the central student post-questionnaire (the Web-based Learning Environment Instrument) together with the available data on its validity. Second, the teacher pre- and post-questionnaires and interviews are discussed as are the researcher classroom observations. Finally, the researcher observations of teacher planning meetings are described.

Student pre-questionnaire

This questionnaire was a background questionnaire given to the students that sought demographic information such as age, gender, and nationality together with information about their English proficiency and skills. This included the participants rating their own English proficiency. The questionnaire was adapted from Mackey and Gass (2005) (see Appendix G). Besides the abovementioned information the questionnaire also elicited information on student participant use of online technologies and applications for learning and social purposes, such as text chatting. In addition, their study habits and the number of

hours each week the participant uses English for communication, entertainment, and information gathering were elicited.

Student post-questionnaire

The student post-questionnaire, was administered using the online SurveyMonkey tool. The questionnaire first asked students to enter their name and the name of their teacher. The next 19 questions elicited the students' general experiences in the blended learning environment. These questions were based on a questionnaire developed by the researcher for an earlier pilot study. Questions 20 through 57 were a slightly modified version of the Web-based Learning Environment Instrument (WEBLEI), which sought to elicit student experiences of the blended learning environment on a variety of parameters and aspects. Below, the WEBLEI questionnaire is described in detail together with the applied modifications.

WEBLEI

The original WEBLEI questionnaire was created by Chang and Fisher (1999) based on Tobin's (1998) framework for investigating online learning environments in university settings. More specifically, the WEBLEI aims at capturing "students' perceptions of web-based learning environments" (Chang & Fisher, 2003, p. 9). Chang and Fisher (2003) subsequently modified the original questionnaire from 1999 and it is this version that was used in this study in a slightly altered form (see Appendix B).

While Chandra and Fisher (2009) claim that the modified version of the WEBLEI questionnaire was meant to be applied to university courses in which the entire course was

offered online, it can actually be used to elicit students' perceptions of courses employing various degrees of online learning. Chang and Fisher (2003) specifically lists its applicability to courses with "Supplemental Use" of web-based learning in which "students use the web to complete part of the course" (p. 7). They continue stating that "students may also complete an assignment, or part of an assignment, using this form of web-based application" (*ibid.*). Thus, it is clear that the WEBLEI can be used in a blended learning environment. Figure 1 illustrates the four scales of the WEBLEI model.

In their rationale for the WEBLEI model, Chang and Fisher (2003) explain that Scale I (Access) is a necessary prerequisite for studying online. Scale II (Interaction) covers learner interaction with one another for the purpose of achieving the stated learning outcomes. In Scale III (Response) students' perception of the learning environment is elicited with a focus on how they feel about using it and whether they believe they have accomplished any learning objectives. These "first three scales of emancipatory activities, co-participatory activities, and qualia [were] adapted from Tobin's (1998) work on Connecting Communities Learning (CCL)" (Chang & Fisher, 2003, p. 9).

Scale II Co-Participatory INTERACTION Participation, collaboration and cooperation	Scale I Emancipatory ACCESS Virtual Subject
Scale III Qualia RESPONSE Perceived student responses	Scale IV Information Structure and Design RESULTS Scope, structure, content, learning objectives

Figure 1. WEBLEI

Recreated from Chang and Fisher (2003).

The fourth Scale (Results) was added by Chang and Fisher (2003) for the purpose of discovering “whether the materials presented follow accepted instructional design standards, such as stating its purpose, describing its scope, incorporating interactivity, and providing a variety of formats to meet different learning styles” (p. 10). They also state that Scale IV is meant to help students “determine what they have gained...from learning in this environment” (p. 11). Thus, Chang and Fisher (2003) claim that “having gone through all the learning activities, from access (Scale I), to interaction (Scale II) to response (Scale III), students should be able to determine what they have gained (Scale IV: Results) from

learning in this environment" (p. 11). Together, the four sets of questions provide a comprehensive analysis of the issues that are likely to affect students' perceptions of any given online or blended learning environment. Thus, it is a fitting and appropriate operationalization of Tobin's (1998) work on evaluating online learning environments.

WEBLEI validation

The WEBLEI questionnaire has been validated twice for slightly different applications. In Chang and Fisher (2003) the questionnaire was administered to 344 Electronic Commerce students at a business school in Australia. They conducted a principal factor analysis to examine the internal structure of the instrument and to extract four factors, followed by a varimax rotation. The results confirmed the existence of four distinct scales. To determine internal consistency the Cronbach alpha reliability coefficient was computed and the discriminant validity determined by using the mean correlation of the individual scales with the other scales as an index. Cronbach alpha ranged from 0.68 (Scale II) to 0.87 (Scale IV) and the discriminant validity mean correlations ranged from 0.37 (Scale II) to 0.49 (all other scales), which indicates that "the scales of the WEBLEI measure distinct although somewhat overlapping aspects of the online learning environment" (Chang & Fisher, 2003, p. 15). In Chandra and Fisher (2009) the WEBLEI was used to evaluate an online learning tool called Getsmart, which was used by 302 students in 11 high school science and physics classes. The Cronbach alpha coefficient for the four scales in the survey ranged from 0.78 to 0.86 and the discriminant validity, which was defined as described in the study above, ranged from 0.52 to 0.59.

The Cronbach alpha reliability coefficient for the modified WEBLEI used for this study was computed. The results are listed in Table 3.

Table 3. Cronbach alpha coefficients for modified WEBLEI

Scales	Cronbach's Alpha	N
Access	.768	7
Interaction	.754	8
Response	.748	8
Results	.914	8
Facilitation	.902	7
Total	.940	38

Compared to the WEBLEI reliability coefficients achieved in Chang and Fisher (2003) and Chandra and Fisher (2009) the reliability for this study meet or exceed those. It is worth noting that the Facilitation scale, which was the main addition to the existing WEBLEI, shows a very high level of reliability at $\alpha = .902$. Likewise, the reliability level for the five scales combined is very high at $\alpha = .940$. Based on these results we can conclude that the WEBLEI is a reliable and valid instrument.

WEBLEI modifications

In order to better be able to use the WEBLEI in this study minor changes were made. Some changes were dictated by the nature of the data collection. For example, question 3 under Scale I was left out because it addressed the time savings students might have experienced by going online from home instead of driving to campus to attend a face-to-face class. The students in this study all had to attend class in a lab to satisfy the attendance

requirements of the intensive English program. Other changes, described below, were prompted by the English proficiency of the student participants.

The questionnaire revision started with a faculty advisor who looked through the student participant questionnaire and suggested words and sentences that they might not understand or might be confused by. The researcher reviewed these and amended the questionnaire to use simpler words or to make the meaning more precise, based on his own EFL/ESL teaching experience. He then asked the teacher of a parallel writing 4 class to choose two representative students, who were asked to read through the questionnaire and circle any words they did not understand in the directions, scales or questions. The two students took about 5 minutes to look through the questionnaire, after which the researcher went over each of the circled words with the two students. He first asked them what they would guess the word meant but in none of the cases could the students verbalize a correct paraphrase or explanation. Thus, the researcher would try to suggest appropriate synonyms he could think of for the problematic words, which would retain the original meaning of the question. The researcher stopped when he reached a word both students understood and wrote this word down. In two cases (questions 35 and 42) the researcher could not think of a suitable synonym. Instead, he then explained it by rephrasing the sentence. The purpose was to see whether the students could understand the concept and idea of the questions. He then re-worded the questions later. At the end, the researcher went over the scales with the students and made sure that they had no

doubts about the meanings. They indicated they understood them all. The whole process took about 15 minutes.

After meeting with the two representative students the researcher revised the questionnaire. Several questions were re-worded to be easier to understand for the participants and to better address the specific BL environment in this study. For example, questions that referred to ‘this environment’ were rephrased to refer to the ‘blended learning environment’ and words such as ‘pace’ (Scale I, question 4) were changed to more common synonyms, such as ‘speed’. Whenever a question was altered the Merriam Webster online Thesaurus was used to ensure that replacement words were indeed synonyms of the problematic words. When no suitable and/or simpler synonyms could be found the question was changed to make the wording simpler while retaining the meaning of the original question. In two cases (questions 35 and 42) the difficult words could not easily be substituted for others without a significant change in meaning. Thus, it was decided to gloss the two problematic words in these questions immediately after the directions for that page of the questionnaire.

Another modification was made to the WEBLEI by the researcher for the purposes of this study. Considering that Chang and Fisher’s (2003) WEBLEI questionnaire is for evaluating students’ perceptions of a learning environment, it nonetheless fails to account for the teacher factor. To address this shortcoming a fifth scale with seven questions was added to the questionnaire. This scale is described below together with its theoretical basis.

Of all the different aspects that combine to form a successful learning environment, the teacher is one of the most important. The effectiveness with which a teacher can create, plan and execute a curriculum plays a big role in how much students learn. Teacher effectiveness can be defined as "how an instructor can best direct, facilitate, and support students toward certain academic ends, such as achievement and satisfaction" (Gorsky & Blau, 2009). Throughout the past 70 years the topic of teaching effectiveness has been researched comprehensively (for a comprehensive analysis of empirical studies from 1995-2004 see Seidel & Shavelson, 2007). Of the many profound influences a teacher can have on students it has been found, for example, that written and verbal interactions between faculty and students is vital (Dennis, Bunkowski, & Eskey, 2007), and that faculty should strive to maintain positive interpersonal relations with students (Kerssen-Griep, Hess, & Trees, 2003). In fact Kerssen-Griep, Hess, and Trees state that "the motivational and learning potentials available in thoughtful course designs and teaching strategies can be undermined by negative and clumsy interpersonal interactions" (p. 375). To this, Crumpacker (2001) adds that student performance is "contingent on instructor skill and level of effort of motivation" (p.1), while Dennis, Bunkowski, and Eskey (2007) state that "of all the situational variables affecting student motivation, perhaps none exerts such a strong and pervasive effect as faculty attitudes and behavior"(p. 39). As numerous as the studies are in this area, it can be challenging to find a clear and concise definition of teacher effectiveness, let alone a manageable overview of desirable teacher traits. However, Chickering and Gamson (1987)

is a good and widely cited source on teacher effectiveness that lists seven principles for good practice in undergraduate education. According to them, a good teacher:

1. Encourages student-faculty contact,
2. Encourages cooperation among students,
3. Encourages active learning,
4. Gives prompt feedback,
5. Emphasizes time on task,
6. Communicates high expectations,
7. Respects diverse talents and ways of learning.

(Chickering & Gamson, 1987, p. 3)

These principles “rest on 50 years of research on the way teachers teach and students learn, how students work...with one another, and how students and faculty talk to each other” and “are intended as guidelines for faculty members, students, and administrators... to improve teaching and learning” (Chickering & Gamson, 1987, p. 4).

Though these principles were formulated more than twenty years ago and were originally intended for the traditional FTF classroom, Chickering and Ehrmann (1996) later commented that “if the power of the new technologies is to be fully realized, they should be employed in ways consistent with the seven principles” (p. 2). Since then, the principles have been applied and adapted to various kinds of web-based and virtual classrooms employing different instructional technologies (Gorsky & Blau, 2009). However, Chickering

and Gamson (1987) only defined the principles formally, which means they must be operationalized in order to be applied. While some researchers have proposed to use Garrison, Anderson and Archer's (2000) community of inquiry model (Gorsky & Blau, 2009; Shea, Pickett, & Pelz, 2003), the author found that for the current study the seven principles could conveniently and fairly easily be operationalized to fit the WEBLEI model. In the process, these questions served to modify and enhance the WEBLEI.

1. The teacher is ready and available to answer my questions.
2. The teacher encourages students to work together and help each other.
3. The teacher encourages me to learn in different ways.
4. The teacher gives me prompt feedback on my work.
5. The teacher is focused on our work during class time.
6. The teacher expects me to do my best / the teacher has high expectations of me.
7. The teacher respects my individual way of learning.

The above questions thus constitute the fifth scale in a modified WEBLEI questionnaire (See Figure 2) and addresses the shortcoming of the original WEBLEI questionnaire which does not specifically address the possible influence of the teacher upon the students' perceptions of a given classroom environment.

Having established the teacher's potential influence on student perceptions we need to also consider the teacher's point of view and his/her perceptions about planning for and

teaching with BL. Considering that teachers have the potential to significantly affect student perceptions of a course a questionnaire was developed to gather data to help describe this aspect of a BL environment.

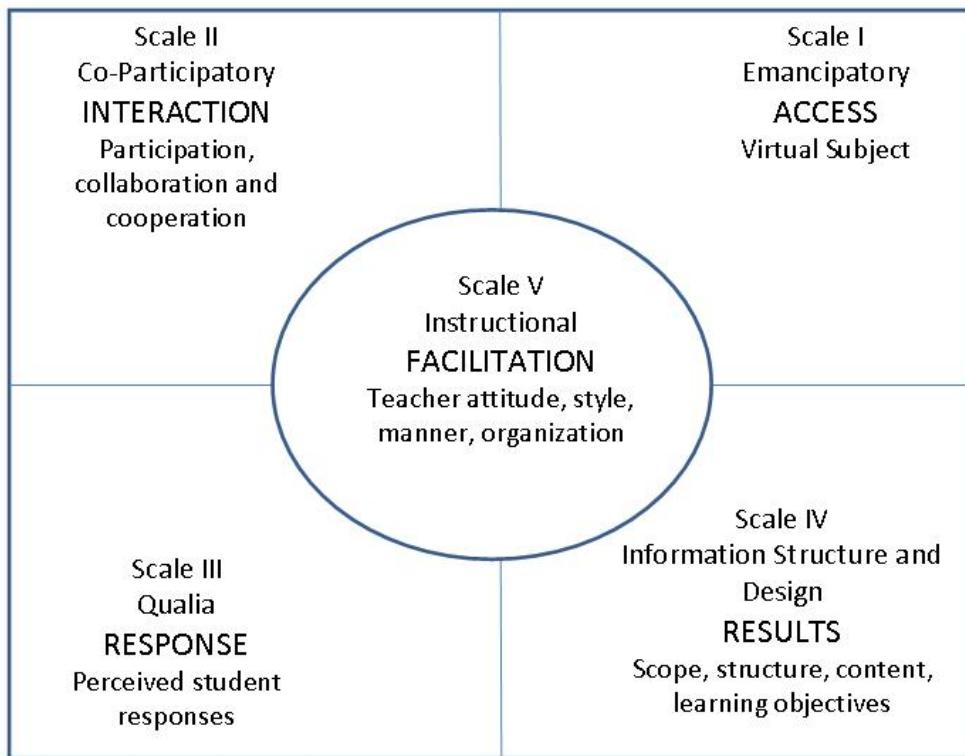


Figure 2. Modified WEBLEI

Teacher pre-questionnaire

In order to get an accurate and detailed picture of the teacher participants a background questionnaire was administered. It elicited demographic information such as age, gender, and nationality and also covered their education, classroom teaching experience, and online/lab teaching experience with writing courses. The teacher pre-questionnaires were administered to the teacher participants during the first meeting of the

group and the researcher. The teachers filled out the questionnaires after signing consent forms.

Teacher post-questionnaire

The post-questionnaire for the teachers was created to elicit their experiences with the training they received prior to the course, the support they received during the course, and their course planning during the semester (see Appendix J). In addition, it also elicited their perception of the use of blended learning pedagogy and technology to teach these courses. The inspiration for the different questions came from various sources that describe the problems teachers might have adapting to teaching blended learning courses. For example, Kaleta, Skibba, and Joosten (2007) describe, based on Berge's (1995) framework, the pedagogical, social, managerial and technological roles and challenges teachers face in the online and face-to-face teaching environments. Most teachers, whether they are beginners in the profession or have many years of experience, are familiar with the face-to-face teaching environment. However, many have little or no experience teaching in an online environment, as illustrated by Kaleta, Skibba, and Joosten (2007) and Hofmann (2006), just to mention a few. Thus, it is of paramount importance that teachers are given the necessary training and that they feel well-prepared to teach in a blended learning environment. Any insecurity or apprehension they might feel can potentially affect the students' perceptions. The post-questionnaire sought to capture the perceptions of the teachers with regards to the different challenges they are likely to have encountered. For example, it seeks to determine how the teachers viewed the pedagogical and technological

training they were given prior to their first contact with the student participants. The teacher questionnaire was also reviewed by a faculty advisor who suggested various revisions to enhance the clarity and directness of the different items. The suggested changes were generally minor, such as replacing 'got' with 'received' in questions 2 and 8. Another suggestion that was adopted concerned changing the middle option of the Likert scale from 'no opinion' to 'Neither agree or disagree' for questions 1 through 16.

While the questionnaires described above helped elicit valuable quantitative data on the student and teacher participant experiences they cannot provide the same level of detail as can be achieved with an interview. Below, the teacher and student participant interviews are described.

Student interviews

After the administration of the questionnaire in each class 19 of the student participants were interviewed. Students were selected randomly whenever possible and interviewed about the questions listed in Appendix K. The interviews lasted an average of about 25 minutes each and were audio-recorded and later transcribed and coded for relevant comments. During the interviews, the researcher would sometimes deviate from the listed questions in order to follow up on interesting statements or perceptions voiced by the students.

Teacher interviews

During the fourteenth week of the semester, all teachers were interviewed individually. The questions listed in Appendix L served as a starting point from which the

researcher sought to make the teachers elaborate on statements and perceptions. Each teacher interview took between 40 and 65 minutes and was audio-recorded and later transcribed and coded for relevant comments.

Classroom observations

Classroom observations were carried out by the researcher during the 14 week duration of the data collection. These 14 weeks spanned the second to the twelfth week of the semester, in which the researcher visited the four teachers on a rotating schedule every day. Since all four classes took place at the same time in the morning, it was only possible to observe one whole class per day. The researcher created an observation sheet (see Appendix M) that was used to gather data on student participant task focus, teacher references to the other learning mode, and general notes on the activities of the class and whether the teacher had any problems with technology.

Participant task focus

It was decided to monitor student task focus because of four issues that became apparent during an earlier pilot phase of a blended learning classroom. The first issue concerned the student participants' ability to work independently and adapt to the increased demands for efficient self-management of their time. Thus, through personal experience during the pilot test and through several semesters of conversations with various teachers in the targeted intensive English program, it was the researcher's experience that the students, the great majority of which were young Chinese, were not used to the teacher taking the role of guide and facilitator, as opposed to the more

traditional role of lecturer. Therefore, in the absence of frequent monitoring and admonitions to stay on task, many students were observed to drift off task, particularly during lab classes when various social interactivity website exerted a strong draw. The second issue raised during the pilot phase was that Chinese students were not as used to group work as the teacher and researcher had expected, which manifested itself in difficulties sharing the workload and being responsible for individual parts of a group project. The third issue centered on the observation that younger students of various nationalities had not yet adapted to the level of independence and responsible self-management of time that the older, more experienced college students had. Thus, their lack of time management skills often delayed classroom activities and meant that homework was not finished on time. The fourth and final issue was possibly specific to this particular intensive English program and might have been caused in part by the university admissions office together with the expectations of the incoming international students.

Over a period of about three semesters, one of which was the researcher's pilot test semester, the university admissions office granted conditional admission to a high number of international students. Many of these students failed to reach the required TOEFL admissions score after their arrival at the university and instead ended up in the intensive English program. Many were, understandably, not happy with this, which had a great affect on their class attendance and the effort they put into their English courses. Throughout the semester, many students would try to take the TOEFL test and other accepted English proficiency tests in order to be able to exit the intensive English program and begin proper

academic courses. This resulted in a somewhat negative mood in many classes, low attendance, and reluctance on the part of the students to actively engage in any activities they did not deem relevant for passing the English proficiency tests. As low attendance and a lack of task focus were observed to be the most obvious signs of this type of student the researcher decided to include the participant on-task measure. The rationale was that if a student is generally unhappy about attending a specific English program this is very likely to have a negative effect on his or her evaluation of this program, regardless of its pedagogical and educational qualities. Thus, it was hoped that this measure might help distinguish generally negative and unmotivated students from those whose problems with the course were actually caused by an aspect of the course itself.

Participant task focus was checked four times during each class at ten-minute intervals, starting ten minutes after the hour. This means that 10, 20, 30, and 40 minutes into class the researcher would quietly circle the computer lab and note whether each student was on task or not. During regular classroom observation the researcher did not move around the room but made sure to place himself where he could see each student and determine if he or she was on task. When determining whether a student participant was on task or not, the researcher had to make some educated judgments based on visible clues as well as his experience as a language teacher. Thus, during lab classes, students were judged to be off-task if they were looking at a non-authorized site, such as Facebook, or was engaged in some form of social online chat. Being off-task also included cases where students were on an otherwise approved site, but were obviously not doing the activity

prescribed by the teacher, were clicking aimlessly from one page to another, were sitting with eyes closed and/or head resting on their arms or on the table, or were engaged in communication or activity that involved a classmate when no pair-work was allowed or needed. In cases of doubt, the researcher would quietly and unobtrusively observe the student for 20-30 seconds to determine if, for example, a student participant's closed eyes just denoted a small period of intense thinking or if the seemingly aimless clicking around on the course website was a legitimate case of the student participant not being able to find a needed page.

During regular classroom observations it could be a little more difficult to determine whether a student participant was on task or not. For example, a student can easily be staring at their book for an extended period of time, but in reality be far away in thought. Similarly, it was not possible for the researcher to get close enough to the students to see, for example, if they were on the correct page in the book. In cases of doubt, the researcher would observe the student for 20-30 seconds to try to determine if, for example, eye movement indicated active reading or if their pen was only paused momentarily during a writing exercise. Whenever the researcher was in doubt, the student was given the benefit of the doubt and marked as on-task. Whenever an observation interval coincided with a predictable period of inactivity, such as when the teacher was preparing an activity or when an activity was not study-related, such as students moving around the classroom in order to form pairs or groups, the observation was delayed a minute or two to allow for the students to be engaged in an active learning activity. Finally, anyone who was absent from the

classroom during an observation period was marked as such and considered off-task for the purposes of data coding.

Teacher learning mode references

Considering that Kaleta, Skibba, and Joosten (2007, p. 138) stress the fact that teachers must “integrate face to face and online learning activities to avoid teaching two parallel and unconnected courses” the researcher decided to observe how frequently the individual teachers referenced one environment when engaged in the other. It was believed that this would provide a measure of how integrated the two modes were in the minds of the teachers and consequently how integrated they would seem to the students. It was decided that references had to be obvious in order to be counted. Thus, references such as ‘online’, or ‘in Moodle’, or ‘in your discussion forum’ given by the teacher while in the regular classroom, were considered valid. Similarly, during lab classes references to the course book, ‘in class yesterday’ or ‘the outline you wrote on paper’, just to mention a few possibilities, were considered valid. However, when a teacher simply mentioned ‘yesterday’, ‘the other day’ or ‘your outline’, for example, the reference was not judged specific enough to warrant counting it as a clear reference to the other learning environment. The reason for this is mainly one of interpretation. Since the researcher never observed two or more classes in a row from any one teacher it would be impossible to argue with sufficient certainty that utterances such as these always invoked the same references in all students.

One could argue that since the face to face and lab classes were alternating daily for all teachers a reference to ‘yesterday’ would, by default, reference the other learning environment. However, the interpretation becomes too problematic when it is not clear how the issue was dealt with or debated the day before. For example, if the issue was discussed verbally during the lab class, the reference need not invoke the online environment at all in the students or the mind of the teacher. Similarly, it was not uncommon that students were asked to brainstorm an issue on paper before agreeing on what to post online as a pair or group. Thus, an utterance such as ‘the outline you started yesterday’ need not reference a computer-based activity, even if the day before was spent in a computer lab. Thus, to ensure data validity, references to the other environment had to be specific and obvious to the researcher in order to be counted as such.

General classroom and lab observations

During class, the researcher would take note of any interesting utterances from the teacher, which provided data relevant to blended learning pedagogy or technology. This included such topics as how much help the teachers gave the students in the lab, where they were supposed to learn to work more independently, how often students needed help with technology, and when the teacher asked the researcher for technical assistance. For example, when a teacher told students during a face to face class that they would be doing something different in class that day, rather than continuing the activity they had started in the lab the day before, because they needed the computers to finish it, there was a deeper message available in this utterance, beyond the simple reference to the other learning

environment. In this case the reference was negated by the fact that the teacher had not been able to integrate the two environments sufficiently to continue the activity in the other mode. Similarly, when a teacher chose to ask the researcher for technical assistance when she was not able to help a student find a document he had written during lab class and saved on the lab computer, this provided data on the level of technical assistance teachers and student might need to successfully use technology for teaching and learning purposes.

In summary, the classroom observation data provided many snapshots of how teachers used technology in the classroom and applied blended learning pedagogy. This allows for data triangulation when compared with the teacher- and student participants' comments on questionnaires and during interviews.

Teacher planning meeting observations

For each of the initial planning meetings the researcher attended the meetings to support the teachers and observe their planning. Towards the middle of the semester the teachers resolved to meet weekly. They indicated that their weekly planning meetings were productive, but agreed that the researcher needed only to attend every other planning meeting. During the meetings the researcher attended he would take 5-10 minutes at the beginning of the meeting to ask the teachers how their classes were going and if they had any pedagogical or technical issues they needed help with. All the planning meetings observed by the researcher were audio-recorded and later transcribed and coded for relevant comments.

Research Procedures

This section contains information about the procedures that were followed prior to and during the data collection. This includes details about teacher and student participant selection, teacher and student training, and a description of the questionnaire application and interview protocols.

Course preparation and teacher participant selection

The data collection for this study was carried out with the invaluable cooperation of the intensive English program at a Midwestern university. While the student participant data were collected during Fall 2010 and Spring 2011 the course preparations started already in June 2010. Tables 4 and 5 give a chronological overview of the preparation and data collection for each semester.

With the permission and help of the director of the intensive English program the researcher contacted the teachers in the program and asked if any would be interested in helping develop the materials for a Writing level 4 blended learning course to be offered during the Fall 2010 semester. While several teachers were interested, only one was available to meet on a regular basis. From July through early August the researcher met with Sandra four times. The primary outcome of these meetings was a draft syllabus for the course based on the existing curriculum goals, referred to as ‘outcomes’, for this course. For the Spring 2011 semester the same teacher drafted the syllabus alone, based on the Writing 4 and Writing 5 outcomes, and shared it with the other teacher. See Appendix D for a list of the Writing 4 and Writing 5 outcomes.

Table 4. Overview of Fall semester research procedures

Time	Tasks
2010	
June/July	<ul style="list-style-type: none"> • Teacher participants recruited
July/August	<ul style="list-style-type: none"> • Syllabus drafted by researcher and the teacher named Sandra
August	<ul style="list-style-type: none"> • Teacher training conducted by researcher • Teacher background questionnaires and consent forms administered • Moodle courses requested
September	<ul style="list-style-type: none"> • Student participants recruited • Student consent forms and background questionnaires administered • Students given BL training • Researcher starts observing classes daily • Teachers hold first planning meeting • Researcher observes and records planning meeting • Workshop on Moodle 'quiz' feature
October	<ul style="list-style-type: none"> • Researcher observes classes daily • Teachers meet weekly to plan • Researcher observes and records meetings • Workshop on Moodle 'grade book' feature
November	<ul style="list-style-type: none"> • Researcher observes classes daily • Teachers meet weekly to plan • Researcher observes and records meetings • Student post-questionnaires administered • Student interviews conducted
December	<ul style="list-style-type: none"> • Three teacher participants answer post-questionnaire • Teacher participants interviewed

Table 5. Overview of Spring semester research procedures

Time	Tasks
2011	
January	<ul style="list-style-type: none"> ● Last Fall semester teacher participant answers post-questionnaire ● Teacher participants recruited ● Teacher training conducted by researcher ● Moodle courses requested
February	<ul style="list-style-type: none"> ● Teacher background questionnaires and consent forms administered ● Student participants recruited ● Student consent forms and background questionnaires administered ● Students given BL training ● Researcher observes random classes ● Teachers hold first planning meeting ● Researcher observes planning meeting ● Teachers resolve to plan their courses individually ● Workshop on Moodle 'grade book' feature
March	<ul style="list-style-type: none"> ● Researcher observes random classes ● Researcher course progress with teachers after class observations
April	<ul style="list-style-type: none"> ● Researcher observes random classes ● Researcher course progress with teachers after class observations ● Student post-questionnaires administered ● Student interviews conducted
May	<ul style="list-style-type: none"> ● Teacher participants answer post-questionnaire ● Teacher participants interviewed

The Writing level 4 course was chosen because, based on the IEP director's experience, a good number of students were likely to enroll in this class following the placement testing in August. From late June through July 2010 three teacher participant elicitation emails were sent out to the IEP instructors, which resulted in five interested teachers. Of these, four were assigned to teach the Writing 4 courses and thus became the

Fall 2010 teacher participants of the study. The Writing 5 classes were chosen in Spring 2011 because the teachers of these courses agreed to participate in an additional round of data collection. Additional data collection was necessary because the Writing 4 classes had only yielded 26 valid student participants. On the recommendation of the four teacher participants from Fall 2010 the IEP program had decided to expand the use of blended learning to other levels and skills. The four 'veteran' teachers, who were already trained were assigned to teach different skill areas and levels in order to support the other teachers of these areas and levels on how to apply blended learning. The teacher named Sandra from the Fall 2010 data collection was the veteran teacher assigned to teach a Writing 5 class in Spring 2011 and support two other teachers of parallel Writing 5 blended learning courses. Only Sandra and one of the Writing 5 teachers, Harry, participated in the Spring 2011 data collection.

Teacher participant training and course planning

In mid-August 2010, one week before classes started and while student placement testing was taking place, the researcher had three, two-hour meetings with the first four teacher participants. The first meeting was reserved for blended learning training.

During the training, the teachers were introduced to blended learning theory and pedagogy and discussed how this could be integrated in a blended learning writing course. During training the focus was mainly on the application of blended learning pedagogy and less on theory. The training was based on several sources. First, a definition of blended learning was provided from Laster, Otte, Picciano and Sorg (2005). Second, the different

types of possible blends were discussed based on Kaleta, Skibba, and Joosten (2007). During this discussion the researcher suggested for the teachers to try to focus on enhancing and transformative blends in their courses. Next, Roschelle et al. (2000) was used for pedagogical and methodological purposes and included their four fundamental characteristics of effective learning environments: 1) active engagement on the part of students and teachers, 2) participation in group-based learning, 3) frequent interaction and feedback between students and the teacher, and 4) the benefit of connections to real-world contexts.

After this, the training covered teacher roles and teacher-learner relationships based on Kaleta, Skibba, and Joosten's (2007) chapter titled "*Discovering, designing and delivering hybrid courses*" in the book "*Blended Learning: Research Perspectives*" edited by Picciano and Dziuban (2007). For example, the challenges that teachers may face in terms of their pedagogical, social, managerial and technical roles were highlighted and strategies for addressing them were discussed. Finally, following the advice of Kaleta, Skibba, and Joosten (2007), course re-design, planning, and teacher and student interaction were discussed. It was repeatedly stressed and demonstrated how the teachers should strive to integrate the face-to-face and online environments in order to create a unified blended learning environment. It is also important to note that while Chickering and Gamson's (1987) 'seven principles for good practice in undergraduate education' were not specifically referenced in regard to how the teachers could go about creating their learning environments, they were nonetheless included. For example, Roschelle et al.'s (2000) four fundamental

characteristics of effective learning environments, which are outlined above, by themselves cover four of Chickering and Gamson's (1987) principles. Throughout the rest of the training the remaining principles were incorporated and discussed.

With regard to the researcher's role, the teachers were encouraged to see the researcher as a technical and pedagogical expert and supporter during the semester, whom they could consult with at any time during the semester. Teacher participants were also encouraged to seek advice from each other during their regular planning meetings as well as of the Moodle tech support specialist who was available for email consultation on technical matters related to the content management system. The training was well-received by the teachers who actively participated and discussed the various topics. Throughout the semester the researcher reinforced the training during the teacher planning meetings.

The second and third planning meetings in the Fall semester focused on planning the syllabus. The teachers were given control of time and content and the researcher took on a secondary role as observer offering only occasional advice and suggestions on pedagogical, technical, and content-related topics. The teachers managed to plan the first four weeks in detail during these two meetings. During this week the teachers also requested their individual Moodle courses from the department tech support person.

For the Spring semester of data collection the researcher had two meetings with the teacher participants during the first week of classes. In the first, one-hour meeting course planning was discussed and the teachers planned the first two weeks of classes together. In

the second meeting, which lasted one-and-a-half hour, the researcher trained the teacher named Harry on blended learning. Two visiting scholars, who were interested in learning more about blended learning, participated in this training, which facilitated good discussion of the various topics, similar to the Fall training session. During this week the teachers also requested their individual Moodle courses from the department tech support person.

Student participant elicitation and pre-questionnaire administration

The student participant elicitation form and the pre-questionnaire had to be administered to the student participants in two different ways. First, during the second week of the Fall 2010 semester, the students from all four classes were gathered in an auditorium where the researcher presented the purpose of the study to all students. Those students who chose to participate filled out consent forms and the pre-questionnaire at the meeting. However, more students than expected, roughly 20%, chose not to participate. Based on the few questions that were voiced, it is suspected that many of these students may have misunderstood the purpose of the study or had questions that they were uncomfortable to raise in front of the group and their teachers. In addition, nearly 25% of the students were absent this day. Thus, the researcher found it necessary to visit each individual class during the following days to elicit consent and data from the students who were absent at the informational meeting. Coincidentally, this proved to be more effective in terms of student willingness to participate since 100% of the students approached in this manner agreed to participate.

For the Spring 2011 data collection student consent was obtained and the pre-questionnaire administered during the sixth week of classes. This could not be done earlier in the semester due to a delay in getting the needed IRB permission to conduct another semester of data collection. This last-minute permission was necessary because data collection switched from a focus on Writing level 4 to Writing level 5. However, this did not change the fact that the course was taught in a BL environment from the beginning of the semester. Thus, this is not believed to have had any influence on the data collection.

Student participant training

Just like the teachers should be trained on how to teach with BL Kaleta, Skibba and Joosten (2007) recommend that students be trained on how to learn effectively in a BL environment. More specifically, they suggest to “manage student expectations regarding the hybrid format and course workload,” and to “identify and develop plans, materials, and activities to help students with the technology and time management challenges many encounter” (p. 139). Student participants were involved in these course training exercises during the last half of the second week and the first half of the third week of the Fall semester. In the Spring semester the student participants were trained during the fourth week of the semester.

In order to prepare the student participant training the teachers were given copies of the materials used for their own training and an outline of possible activities they should try to use in their classrooms. While the outline suggests that it should be possible to complete the activities during one class period the teachers decided to split them over two

class periods. They also added an online ‘treasure hunt’ that required the students to visit various parts of the Moodle course and, among other things, update their online user profiles. According to the teachers, the training was well received by the students.

Classroom observations

From the beginning of the third week the researcher commenced daily observations in the classes on a rotating schedule. During the Fall semester, 42 observations were conducted, evenly distributed between the four participating teachers. For each observation the researcher would typically arrive 5 minutes prior to the beginning of class and give the teacher the name tents that the students had previously made. The teacher would then distribute the name tents and ask the students to place them on their table or next to their computer in the labs. This was done so that the researcher could identify the individual students and keep track of their behavior and attitude during class time for the purpose of later being able to cross-reference this with individual student opinions of their classes. Typically, the teachers would then begin the lesson while the researcher took notes on student task focus, teacher references etc., as described under *Classroom observations* in the Data Collection Techniques and Materials section. During observations the researcher was careful to remain as unobtrusive as possible and only participated briefly if addressed directly by the teacher to provide advice, technical support, or an opinion on something. However, the teachers very rarely involved the researcher in the class. Instead, they would typically briefly chat with the researcher or ask any advice they needed once the students were engaged in an independent activity.

During the Spring semester, the number of classroom observations conducted by the researcher was significantly reduced. The reason for this is based on the observed student behavior during the previous fall semester. Students were found to almost always be on task and no students stood out as being off-task significantly more than others. In addition the course teachers were able to observe the student behavior and later confirmed the researcher's observations regarding a few of the students' behavior. Thus, the researcher conducted a total of 10 classroom observations during the Spring semester and asked the teachers to comment if any of their students were consistently off-task during the semester.

Teacher planning meetings

During Fall semester the participating teachers had their first planning meeting three weeks into the semester. At this meeting they planned the next two weeks of classes. However, they also agreed to start meeting once a week for about one hour to plan the next week's classes because they found it easier to plan only one week ahead instead of three or four. During these planning meetings the teachers shared the work of finding paper-based and online resources to cover the course outcomes and distributed the work of creating quizzes, exercises and worksheets that were then shared by everyone.

The researcher attended each of the first three planning meetings to support the teachers and create an enjoyable environment by providing candy for them to eat while planning. They were generally allowed to plan on their own, with minimal input from the researcher. Very rarely did the teachers directly address the researcher to ask for advice on

issues such as Moodle options for quizzes and how to best make various resources available to the students in the Moodle course. A few times, the researcher interjected comments about how activities that the teachers were discussing could be carried out in the online environment. The goal with this was to encourage the teachers to integrate the FTF and online environments. After the first three planning meetings the researcher started to only attend every other planning meeting. During these meetings he would take 5-10 minutes at the beginning of the meeting to ask the teachers how their classes were going and if they had any pedagogical or technical issues they needed help with. In total, the teachers held approximately 10 planning meetings during the Fall semester. Twice, teachers asked for more information on specific Moodle features, for which the researcher subsequently put together workshops. These workshops, which were independent of the planning meetings, were both conducted the week after the teacher requested them and lasted approximately 45 minutes each.

During the Spring semester the teachers had only two planning meetings together after the initial meeting at the beginning of the semester. At the second meeting Harry informed Sandra that he was not comfortable planning his classes this way. The two teachers then agreed to not have any more joint planning meetings. However, since the two teachers shared an office they agreed to try to share tips and ideas and to give each other access to their Moodle courses in order to be able to share resources. Because there were no planning meetings among the teachers the researcher had less contact with these teachers during the semester. However, the researcher made sure to inquire about the

class progress of the teachers and to inquire if they needed any help when he observed their classes or met them on campus. These observations and meetings typically happened once a week.

On the request of both teachers the researcher conducted a workshop on the 'Grade Book' feature of Moodle during week 4 of the Spring semester. This workshop was very similar in content and duration to the one offered during Fall semester.

Student post-questionnaire and interview administration

The post-questionnaires were administered to the students via SurveyMonkey, which allows for online construction and administration of surveys. The survey was administered during the 13th week of the Fall semester and during the 14th week of the Spring semester. In both semesters the researcher visited each of the participating classes and gave the student participants a brief introduction to how to go about answering the survey, which was available through a link on their Moodle course page. Student participants were shown how to click the buttons on the Likert scale questions to indicate their opinions and the three different scales used in the questionnaire were explained. In addition, the participants' attention was drawn to the glossed words and the questions they referred to. Finally, the students were told that if they encountered words or sentences they did not understand they were welcome to look them up using online electronic translators, which many students had already used extensively during class, or to ask the researcher. Similarly, the students were also reminded of what the term 'blended learning' referred to, namely the particular mixture of online activities, increased number of lab

classes, and regular FTF classroom activities. While students answered the questionnaire the teachers remained outside the classroom.

The student group interviews were conducted immediately after the students had filled out the questionnaires, except for one class. Due to a scheduling problem, the students in Ann's class could not be interviewed immediately after answering the post-questionnaire. Instead, they were interviewed 10 days later, due to the intervening Fall semester break. In some classes, the number of participating students in attendance on the day of the interviews exceeded the number that could comfortably be interviewed as a group, which was set at five students. In these cases students would draw numbers from a bag which held pieces of paper with numbers from 1 up to the number of total participating students in attendance. Students who drew the numbers from 1 through 5 were interviewed. In Jim's class less than five participating students were in attendance the day the interview took place so only four students were interviewed in this class section.

Teacher post-questionnaire and interview administration

The teacher post-questionnaire was also administered via SurveyMonkey. The teacher participants were sent the link to the post-questionnaire at the conclusion of the student data collection. The teachers were free to complete it at their convenience, which three of the teachers did during the two weeks following the student data collection. Three to four weeks later, in early January, it was discovered that Sandra had forgotten to answer the survey. The researcher reminded her to do it via email and she then completed it. For the Spring semester the teachers both completed the post-questionnaire in early May.

The teacher interviews were conducted during the 14th week of the Fall semester, the week following the semester break, and during the week immediately after the conclusion of the Spring semester, the first week of May. Each teacher was interviewed individually and each interview took between 40 and 65 minutes. The interviews were audio recorded and later transcribed and coded.

Data Analysis

This section describes the data analysis procedures that were performed on the collected data in order to answer the research questions. Each research question is discussed separately while the research questions and data sources are listed in Table 6. All qualitative data were coded by the researcher. A subset of approximately 25% of the data, and any cases in which the researcher were in doubt, were checked by another rater. Any differences between the two raters were solved through discussion.

To address the first research question (“What impact does a training and support program have on the teachers’ experience of designing and teaching in a BL environment?”), data was analyzed qualitatively and quantitatively. The answers to the teacher questionnaire were totaled and mean scores for each question indicated where on the Likert scale the teachers’ answers fell. The teacher interviews and the recordings of the teacher planning meeting were transcribed and analyzed for emerging categories. In addition, the researcher’s classroom observation notes were analyzed and coded for relevant references. The focus of the analyses were on teacher opinions of the course

planning and design process and their experiences with the teacher training program and subsequent technical and pedagogical support.

Table 6. Research questions and data sources

Research Question	Data Source	Analysis focus
1. What impact does a training program have on the teachers' experience of designing and teaching in a BL environment?	Teacher questionnaire Teacher interviews Researcher notes	All questions All questions Notes from planning meetings Notes from classroom observations
2. How do students describe the productiveness of the blended learning environment in an IEP writing course?	WEBLEI Questionnaire Researcher Observations Student Interviews	Scales I – IV Notes regarding student on-task behavior
		Questions 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
3. How do students perceive their teacher's practice and behavior in a BL environment?	WEBLEI questionnaire Student interviews	Scale V Any comments relevant to this issue
4. To what degree does teacher practice and behavior affect students' perceptions of the course?	Investigate if any correlations between student perceptions of course and their perceptions of their teachers. Student interviews	WEBLEI Scale I-IV averages WEBELI Scale V averages Any comments relevant to this issue

The second research question ("How do students describe the productiveness of the blended learning environment in an IEP writing course?") was answered by analyzing the student responses to Scales I – IV on the WEBLEI questionnaire. The results for each scale were computed through a calculation of the mean and standard deviation scores. This provided a measure of how students perceived the BL environment in relation to the four

scales (Access, Interaction, Response, and Results). The student interviews were used to provide additional information on this subject and to triangulate student opinions. The student interviews were analyzed and coded in the same manner as the teacher questionnaires. The researcher's classroom observations of students' on-task/off-task behavior were also analyzed and used for triangulation purposes.

To answer the third research question ("How do students perceive their teacher's practice and behavior in a BL environment?") the mean and standard deviation scores on Scale V, Facilitation, of the WEBLEI questionnaire were calculated. The scores for each teacher, assigned by the class students, will indicate how the teachers compare across the courses. Any relevant comments from the student interviews will be used to provide additional information on this topic.

The fourth research question ("To what degree does teacher practice and behavior affect students' perceptions of the course?") was answered by calculating the means of the student ratings for each scale and conducting a One-way ANOVA with the scale means as the dependent factors and teacher as the independent factor. In addition, a One-Way Between-Subjects Random-Effects Analysis of Variance was conducted on the data to estimate whether classroom teachers accounted for a meaningful amount of variance in post-questionnaire scores (i.e. student ratings of the BL environment). Moreover, researcher classroom observations were considered whenever relevant.

Summary

This chapter covered the research methodology employed in this study. As such, this study employs a mixed methods, concurrent embedded approach centered around two quantitative questionnaires backed up by qualitative data from participant interviews. Next, the research context of the IEP program was described, followed by the Writing 4 and 5 course sections in which data were collected. The paper-based and online course materials were then described together with classroom and lab activities. The teacher and student participants were described next, in addition to the data collection techniques and materials. Finally, the research procedures were described in detail, followed by an overview of how data analysis was carried out. In sum, this information provides the background for the Results chapter that follows.

CHAPTER 4: RESULTS

RQ 1: What impact does a training and support program have on the teachers' experience of designing and teaching in a BL environment?

This question seeks to determine how the teachers in this study experienced designing, and teaching in, a BL environment. A detailed analysis of the teacher post-questionnaires, post-interviews and the researcher's classroom observations provided the data to answer this question. The quantitative data from the teacher post-questionnaires are presented first. Next, the qualitative data from the teacher post-interviews and the researcher's classroom observations are presented according to the four categories that were discovered in the data. During the presentation of these results the findings are triangulated with the findings from the teacher post-questionnaires in order to highlight any agreements or discrepancies.

The teacher participants in this study were 5 ESL writing teachers, who all answered a 17 item post questionnaire which was split into two parts based on two different Likert Scales. For questions 1 through 13 (see Table 7) the Likert Scale included the following levels: (1) *Strongly Disagree*, (2) *Somewhat Disagree*, (3) *Neither Agree or Disagree*, (4) *Somewhat Agree*, and (5) *Strongly Agree*. For questions 14 through 17 (see Table 8) the Likert Scale included the following levels: (1) *Difficult*, (2) *Somewhat Difficult*, (3) *Not Easy or Difficult*, (4) *Somewhat Easy*, and (5) *Easy*. Within and across the two parts there are several items that deal with similar or related topics, such as pedagogical preparedness and technical preparedness. These items will be presented together.

Turning first to items 1 through 13 the mean ratings for each item are generally very high with several topping out at the highest point of the Likert scale, indicating that they *Strongly Agree* with the statements in those items. One of these items can be found in the first topic, which deals with the teachers' perceptions of the pedagogical aspects of the course. More specifically, item 1, *After getting the BL training I felt pedagogically prepared to teach this course ($M = 4.50, SD = .55$)*, and item 2, *I received the BL pedagogical support I needed during the course ($M = 5.00, SD = .00$)*, center on their pedagogical preparedness and the pedagogical support they received from the researcher throughout the semester. Based on the ratings of these two items it is clear that the teachers felt well-prepared and supported. Three more items also have pedagogical implications, namely item 4, *There was a good balance between online and classroom activities ($M = 4.83, SD = .41$)*, item 5, *The online and classroom activities integrated well ($M = 4.83, SD = .41$)*, and item 6, *I made an effort to integrate classroom and lab activities with each other ($M = 4.67, SD = .52$)*. From these ratings we learn that the teachers agreed that they made an effort to integrate classroom and lab activities, that these activities integrated well, and that they were able to find a good balance between them. In addition, the teachers rated the ease with which classroom and online activities integrated in item 17, *Integrating the online and classroom activities was... ($M = 4.00, SD = 1.10$)*. This rating indicates that the teachers felt that it was *Easy* to do so, though Jim dissented the most with his rating of (2) *Somewhat Difficult*. The other teachers rated it either (4) *Somewhat Easy* (Ann, Sandra (Fall), Harry) or (5) *Easy* (Jennifer, Sandra (Spring)).

The second topic derived from the responses to the teacher post-questionnaire centers on the technological aspects of teaching within a BL environment. More specifically, it concerns the teachers' assessment of their technical preparation, the technical support they received throughout the semester, and their experience with the various online activities they used. The teachers rated their technical preparation and the technical support they received in item 7, *I felt technically prepared to teach this course* ($M = 4.17, SD = 1.17$), item 8, *I received the technical support I needed during this course* ($M = 4.83, SD = .41$), and item 14, *Getting technical support was...* ($M = 4.83, SD = .41$). Interestingly, for item 7 the mean rating indicates that the teachers all "somewhat agreed" that they felt technically prepared to teach the BL writing course. However, the comparatively large standard deviation was caused by Harry rating this item as (2) *Somewhat Disagree*. This issue also came up during his interview and will be discussed in detail later. The ratings for items 8 and 14 indicate that the teachers *Strongly Agreed* they got the technical support they needed during the course and that getting this support was *Easy*. Regarding the online activities the teachers used, the ratings for items 12, *The online activities worked well* ($M = 4.83, SD = .41$) and 15, *Managing the online activities was...* ($M = 4.67, SD = .52$) indicate that the teachers *Strongly Agreed* that the online activities worked well and that managing them was *Easy*. At the same time, the teachers rated item 13, *The classroom activities worked well* ($M = 4.67, SD = .52$) fairly high. This signals that the online mode did not disrupt the classroom mode and that both worked well together. Despite Harry's low rating of item 7, he rated item 12 a (5) *Strongly Agree* and item 15 a (4) *Somewhat Easy*. This signals that

he, despite a lack of technical preparation, felt he was able to catch up fairly quickly.

However, considering that some of his students voiced some dissatisfaction with the types of activities they did online and with a lack of feedback on their essays drafts, this may indicate that he did not challenge himself very much in his online teaching. This will be discussed in greater detail in the qualitative data section.

The remaining items of interest do not, per se, form a unified topic. Rather, they are interesting on their own and because they fit some of the categories that were found in the qualitative data. Starting with item 9, *Using BL did not make this course more demanding to teach* ($M = 4.50$, $SD = .55$), we find that teaching this ESL writing course in a BL environment did not make it more demanding for the teachers. It is also interesting to note that for item 11, *My teaching style matches well with BL* ($M = 5.00$, $SD = .00$), the teachers indicated that their teaching styles matched well with BL. This may be an indication that even if teachers have fairly different approaches to planning and teaching, as was the case with Harry compared to the other teachers, a blended learning approach can accommodate a variety of approaches and preferences. Moreover, the teachers' rating of item 3, *I had enough influence on the course content and activities* ($M = 4.83$, $SD = .41$), suggests that they were all able to teach their individual courses in a manner they were comfortable with. Thus, the collaborative planning and the pedagogical and technical demands placed upon the teachers within this new BL environment still allowed them to feel in control of their course and their students. Finally, it is very positive to see that all teachers indicated in item 10, *I would like to teach other ESL courses using BL* ($M = 5.00$, $SD = .00$) that they would like to

teacher other blended learning ESL courses. This suggests that they all found something of value for both themselves and their students. Indeed, this is supported by various comments made by the teachers during their interviews, which are discussed in greater detail in the qualitative data section.

Table 7: Teacher responses to items 1 – 13

Item	N	M	SD
1. After getting the BL training I felt pedagogically prepared to teach this course	6	4.50	.55
2. I received the BL pedagogical support I needed during the course	6	5.00	.00
3. I had enough influence on the course content and activities	6	4.83	.41
4. There was a good balance between online and classroom activities	6	4.83	.41
5. The online and classroom activities integrated well	6	4.67	.52
6. I made an effort to integrate classroom and lab activities with each other	6	4.67	.52
7. I felt technically prepared to teach this course	6	4.17	1.17
8. I received the technical support I needed during this course	6	4.83	.41
9. Using BL did not make this course more demanding to teach	6	4.50	.55
10. I would like to teach other ESL courses using BL	6	5.00	.00
11. My teaching style matches well with BL	6	5.00	.00
12. The online activities worked well	6	4.83	.41
13. The classroom activities worked well	6	4.67	.52

Note: WEBLEI Likert scale: (1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither Agree or Disagree, (4) Somewhat Agree, and (5) Strongly Agree.

Table 8: Teacher responses to items 14 – 17

Item	N	M	SD
1. Getting technical support was...	6	4.83	.41
2. Managing the online activities was...	6	4.67	.52
3. Managing the classroom activities was...	6	4.17	.75
4. Integrating the online and classroom activities was...	6	4.00	1.10

Note: WEBLEI Likert scale: (1) Difficult, (2) Somewhat Difficult, (3) Not Easy or Difficult, (4) Somewhat Easy, and (5) Easy.

Having now presented the available survey data relevant to this question we turn to the qualitative data that were collected. These data come from a detailed analysis of the teacher post-interviews which revealed that four categories were particularly salient: 1) Pedagogical Training and Planning; 2) Technological Preparation, Support, and Integration; 3) Collaboration; and 4) Teaching Impact. During the presentation of these categories links to the relevant questionnaire items are provided in an effort to triangulate the findings from the two sources.

Pedagogical training and planning

This category centers on the pedagogical aspects of the teachers' experiences in this study. The pedagogical training refers to the training the teachers were given. As described in chapter 3 the teachers were trained on blended learning pedagogy and lesson planning during three, two-hour meetings in the week before classes started in the Fall of 2010. For the Spring 2011 semester this process took place during two meetings that lasted a total of two-and-a-half hours. The pedagogical planning aspect refers to several parts of the teachers' experiences: First, it deals with the preparation of the course syllabus that the researcher and Sandra did for the Writing 4 course prior to the Fall 2010 semester. Second, it refers to the planning that the teachers had to do to make online and regular FTF classes work well together. Third and last, it focuses on how teachers had to learn about, and adapt to, online pedagogy.

Turning first to the pedagogical training that the teachers received from the researcher, they were all positive towards the training and felt that it covered their needs.

Jennifer, Sandra, and Jim all commented in detail on the training and expressed that it was beneficial, provided them with the pedagogical reasons for using BL, and helped motivate them to make an effort to experiment with BL and apply it. Jim made one of the comments to this effect:

I think that was a good way to for me to see, like researching how BL works, to give me a better idea. And as far as planning and using, signing up my class for BL, I think it was beneficial, because I saw the usefulness and what are the strengths of BL, so I thought that was a good background to get into.

(Jim, interview, November 2010)

Jennifer, in particular, commented on the value of giving teachers a reason for adopting BL pedagogy and motivating them to do so. More specifically, she recounts how she used to teach writing classes in another program and how their approach failed to motivate her:

Jennifer: Somebody [...] wanted us [...] instructors, they wanted us to use the Moodle more and I remember I did not really want to do that, because it was presented that way; ‘use it more.’ ‘Well, I don’t want to, so I am not going to, and you won’t know it.’

Researcher: And no rationale for why use it more?

Jennifer: Right, right. And it wasn’t just like a sheet like you gave us, like; ‘read this, these are the reasons why it is good, now go ahead and do it.’

Having the communication helped a lot and presenting it, the way you presented it, helped a lot. (Jennifer, interview, December 2010)

On the topic of pedagogical planning, the teachers made several comments during their interviews. These comments focused on the planning meetings the teachers held with and without the researcher present before and during the Fall 2010 semester. Some teachers also commented on the pedagogical challenges they felt they encountered.

Starting with the pedagogical planning, Jennifer remarked that she liked the initial planning meeting, which was held before the beginning of the Fall 2010 semester. It was new to her to plan as much as three weeks out, but she enjoyed the fact that it made her job easier.

Jim also liked the fact that an overall syllabus had already been prepared before the beginning of the Fall 2010 semester. In addition, he explained that he preferred to meet to plan classes weekly because it kept the instructors better synchronized. If they met with greater intervals some instructors might be ahead or behind in relation to the plan.

Moving to the issue of pedagogical challenges Harry, Jim, and Jennifer all shared different challenging aspects of teaching in a BL environment. Harry's biggest challenge was that he did not know which class he was teaching until the day before classes started in Spring 2011. Thus, he could not prepare any online materials and activities. In fact he was not even able to request a Moodle course section because the Moodle course title is linked to the class level, which he did not yet know. While this was not a problem for Sandra during Spring 2011, because she already had experience teaching writing in a BL environment, Harry's comments make it clear that it affected him:

Researcher: How would you describe the planning and preparation for this course and the training you received at the beginning of the semester?

Harry: I, this was one of my frustrations, because there really was no planning and preparation for me, before I stepped in to teach the class. And I think that that was a problem both for me and for the students. [...] There were a lot of things to learn so the teacher needs to be really comfortable with the system, so that they can teach and show the students how to use it. The students need to, you know, have at least a week, maybe two weeks, I think, of being taught the system, making sure they all know how to use the system and that there are no problems. [...] I would have benefitted by having a couple of weeks before the semester started to have my materials up and to learn how to use it. That was a real, that was frustration for me.

Researcher: And what was the reason you didn't have that?

Harry: I don't think I even knew I was teaching this class until the day before classes started, or maybe the very week classes started. You know, we didn't get the course assignments until much later. (Harry, interview, May 2011).

Jim found it challenging to plan lab days and regular classroom days so that they formed an integrated whole:

Jim: One of the challenges I faced [...] probably the hardest one for me, was [...] connecting the computer lab days with the classroom. [...] But I think, with time, I made the transition a lot easier and what we did in the lab was

just as important as what we did in the classroom. And how the two connected, that was probably the more difficult part for me to figure out. [...] So I think that using the two together made it stronger than having them two separate entities. (Jim, interview, November 2010).

Note in Jim's comment how he maintained that both online and classroom activities were equally important and how he was able to combine the online and regular FTF modes to form a stronger learning environment. These were both factors that the researcher stressed during the teacher BL training. Jennifer had a similar experience that focused on the Moodle forums. She wanted to make sure that when the students posted in forums she responded to them in a timely manner. In her own words

That was a challenge because it was outside of class that I had to do it and I would forget to go on there and so I think that was challenging. But I did better in the end. In the past few weeks I have been doing it a lot better and the students are checking it and we talk about, you know, 'I posted that to your forum', 'I replied to you.' We talk about it in the classroom, which I think is good, you know, incorporating the lab plus the classroom. (Jennifer, interview, December 2010).

Just like Jim, Jennifer demonstrates her commitment to employing the BL pedagogy like she had been taught during the training session. In particular, she makes sure to integrate the online and classroom environments.

These comments from Sandra, Jennifer, Jim, and Harry support and expand upon the teachers' ratings of several of the items in the post-questionnaire that focused on pedagogy. More specifically, items 1 ($M = 4.50, SD = .55$), 2 ($M = 5.00, SD = .00$), 4 ($M = 4.83, SD = .41$), 5 ($M = 4.83, SD = .41$), 6 ($M = 4.67, SD = .52$), and 17 ($M = 4.00, SD = 1.10$). Note how Jim's quote above helps explain why he rated item 17 *Integrating the online and classroom activities was [Somewhat Difficult]*. In the same vein, Harry's inability to prepare technologically helps explain why he rated item 7, *I felt technically prepared to teach this course, as Somewhat Disagree*. Likewise, Jennifer's and Jim's comments help demonstrate the high mean rating for item 6, *I made an effort to integrate classroom and lab activities with each other* ($M = 4.67, SD = .52$).

In summary, it is clear that the teachers found the blended learning training informative and useful and that they appreciated both the longer planning meetings at the beginning of the semester and the shorter weekly planning meetings throughout the semester. It is also clear that they believed it was worth the effort to work to overcome the pedagogical challenges they encountered while trying to teach in a BL environment. However, pedagogy was by no means the only aspect the teachers commented on during their interviews. Therefore, we now turn to their comments regarding the technological preparation, support and integration.

Technological preparation, support, and integration

The initial training program in the beginning of the Fall and Spring semesters centered mostly on pedagogical training. The researcher assumed that the participants had

a basic knowledge of the content management system (CMS) Moodle. As the teachers' comments below will show, this was not the case for all the teachers. However, it also was not the researcher's intention to make the blended learning environment very technology-heavy or mandate that the teachers use complex tools within Moodle. Instead, the teachers were allowed to work their way into Moodle and become familiar with it at their own pace. The researcher was then ready to offer advice and guidance when the teachers felt like exploring more advanced features. Some of the following comments, which deal with the teachers' experiences using technology in the blended learning environment, illustrate the positive experiences the teachers had, as well as the challenges they faced as they explored using this technology.

Focusing first on technological preparation Sandra and Harry both faced some initial challenges. For example, while the researcher had expected all the participants to have a basic knowledge of Moodle it is clear that Sandra did not know how to use Moodle when she first became involved with the study in the Fall 2010 semester.

The other teachers, I think they knew (about Moodle). I was the only one who had never done anything with Moodle, like I had no idea. (Sandra, interview, December 2010)

Sandra overcame this lack of knowledge by seeking the help of another teacher, who was more experienced in using Moodle, but who was not part of the study. She explained that this teacher helped her understand how to use discussion forums and how to upload videos. The researcher expected the teachers to come to him in situations like this. The fact

that Sandra chose to learn from a colleague may indicate that she preferred asking quick questions and getting immediate help rather than setting up an appointment to meet someone later. However, it is evident from her comments regarding the researcher's availability to support her that she considered him a good resource. This will be discussed in the Support section.

Harry also made comments to the effect that he was not familiar with the Moodle CMS:

This semester I had to learn how to use this system and it was... I didn't do as good a job of teaching my students how to use it, because I didn't know myself, at the beginning. (Harry, interview, May 2011)

In addition, Harry commented that he would have benefited from having "couple of weeks before the semester started to have my materials up and to learn how to use it" (*Harry, interview, May 2011*).

However, even though both Sandra and Harry were not familiar with Moodle at the outset of the study, they both reported getting the technical support they needed. This was also the case with Ann and Jim. Interestingly, several teachers explained that they did not seek out the researcher, the available online Moodle tutorials, or the departmental Moodle support person as much as they could have. This indicates that there may have been a limit to how much time the teachers were able to devote to learning Moodle and seeking out technology support and training. For example, Harry made a comment to this effect:

Harry: I actually felt like you were really accessible. The problem was, honestly, I didn't seek out, I should have sought out more. I haven't fully tapped the potential and that's because I just didn't seek out that help. But I felt that the help that I needed, I got. It was pretty easy and painless. (Harry, interview, May 2011)

On the topic of the Moodle training the teachers received during the semester everyone who commented found it useful. For example, Sandra made a comment to this effect:

Researcher: We did a little workshop on the quizzes and I believe a little bit on the grade book. How, was that sufficient, did you need more or less there?

Sandra: That was sufficient, I just needed to sit down myself and play around with it, I just never did. So, and I think that having all those trainings on there is fine, it's one of those things where I could just go on there and...

Researcher: You are referring to Ryan's (the department Moodle support person) tutorials?

Sandra: Yeah, the tutorials. I could go on there and do it myself, I just never did. (Sandra, interview, December 2010)

During his classroom observations the researcher also noticed that Sandra seemed a bit uneasy about how to solve problems with the computers and with Moodle. For example, she twice referred students' technology problems to the researcher and twice asked for help on how to use features of Moodle. None of the other teachers asked the researcher for technical assistance during his observations of their classes.

It is worth pointing out that the teachers clearly appreciated not being forced to adopt and integrate more complex Moodle features before they felt ready to do so. The researcher deliberately let the teachers explore Moodle at their own pace, instead of pressuring them to try new features before they felt ready. For example, Jennifer did not feel overwhelmed with the technical or pedagogical demands:

I think that was a good process. I don't think any of us felt overwhelmed with what we were doing [...]. I think it worked out really well and especially meeting with each other helped ease our fears, if we had any fears. (Jennifer, interview, December 2010)

Turning to the issue of technology integration, many of the teachers made positive comments about the Gradebook tool in Moodle. At the request of the teachers the researcher held a workshop on how to use the grade book in both Fall and Spring semester. The teachers who chose to use the Gradebook tool felt that once they had learned how to use this tool it made grading easier and faster. Another Moodle tool that several teachers grappled with was the quiz feature. The teachers requested a workshop on the Moodle Quiz tool in the Fall semester, after which they attempted to use it with varying success. Sandra, for example, commented that:

I am still not real at ease with the quizzes, I still need to work on that. In fact there were some things I wanted to be able to do as a quiz and never quite figured out. Like, I tried it one time and it came out all wrong and I never

went back and tried to figure, you know, fix it. So yeah, I probably would like to still figure out the quizzes more. (Sandra, interview, December 2010).

Jim also found the quiz feature challenging to begin with:

Jim: The first time I used the quiz I guess it was a little new to me and it was kind of difficult and took more time than I thought, but I eventually got it working and stuff.

Researcher: And was it worth the effort?

Jim: I think so, yeah. It provides you with really quick feedback to students.

(Jim, interview, November 2010).

Sandra and Jim's comments demonstrate that the teachers were motivated to experiment with the new technology, even if they were challenged and experienced momentary setbacks. This also underscores the validity of the researcher's decision to let the teachers explore new technology tools at their own pace, rather than mandate the use of them. Additionally, the Moodle Gradebook and the Quiz feature are both tools whose utilization in the BL environment are as much for the sake of the teachers as for the students. In other words, it is valid and important to collect this kind of data about the teachers' experiences of teaching in a BL environment.

Another technology issue also affected some of the teachers, namely the lack of a computer projector in their regular classrooms. Some teachers, like Jim, Harry, and Jennifer, had regular classrooms equipped with a projector. Thus, they were able to bring a laptop to class and display the course Moodle page and various other online resources. Sandra, on

the other hand, had her regular classes scheduled in a room without a projector during both Fall and Spring. This, in turn, brought up some pedagogical challenges for her. During her Fall interview, she described these challenges very well:

I would have liked to have access to computers every day, that would be nice.

I know that is probably asking too much but, you know, sometimes we would talk about something and then I'd want them to practice it or do it and since we didn't have computers they'd have to write it out or I'd have to figure out a way. It was almost backwards for me. When I first started, I would have been having to figure out how to make it a computer exercise but now I got so used to that it was hard to go back and figure out how to make it a paper exercise. (Sandra, interview, December 2010).

Sandra's comment illustrates one of the effects that teaching in a BL environment had on many of the teachers. After they had experienced teaching in a BL environment and had been taught appropriate BL pedagogy this became their preferred mode of teaching. Indeed, the researcher has observed that all of the participating teachers continued to use BL in the semesters after their participation in the study. In fact, the teachers also decided to use BL to teach their other courses while they were participating in the study. As a result, different teachers applied BL to courses such as speaking and listening and reading. This, in turn, demonstrates that the teachers saw some very real advantages to using blended learning for ESL teaching in general. This will be discussed in greater detail in chapter 5.

The interview comments above provide additional information about the teachers' ratings of several of the items in the post-questionnaire that focused on their use of technology and its integration into the BL environment. More specifically, their comments provide information about items 7, *I felt technically prepared to teach this course* ($M = 4.17$, $SD = 1.17$), 8 *I received the technical support I needed during this course* ($M = 4.83$, $SD = .41$), 12 *The online activities worked well* ($M = 4.83$, $SD = .41$), item 13 *The classroom activities worked well* ($M = 4.67$, $SD = .52$), 14 *Getting technical support was...* ($M = 4.83$, $SD = .41$), and 15, *Managing the online activities was...* ($M = 4.67$, $SD = .52$). For example, it is easier to understand why Harry *Somewhat Disagreed* with item 7. The teachers' expressed satisfaction with the technical training and support also help explain the high ratings for items 8 and 14. Likewise, the fact that they fairly quickly felt comfortable using Moodle helps explain the ratings for item 15. Lastly, Sandra's frustration with the lack of media in her regular classroom might provide some of the reason for the rating of item 13.

In summary, these teacher interview comments demonstrate that the teachers felt they could access the needed technical training and support, even if some of them were less confident about their technology skills at the outset of the semesters. It was also clear that some teachers found it difficult to allot time to learn about various Moodle features. Therefore, they appreciated not being forced to implement some of the more complex Moodle tools until they felt ready to do so. In addition, Sandra's experience with teaching in her regular classroom without a projector illustrated that the teachers faced some challenges when trying to integrate the technology into the blended learning environment.

Having now covered the pedagogical and technical aspects of the teachers' experience we turn to another issue which stood out upon analysis and categorization of the teacher interview data, namely collaboration.

Collaboration

On the topic of collaboration, a majority of the teachers enjoyed the collaborative aspect of the planning and preparation. They reported that it made planning and preparation easier, faster, and more interesting and creative while increasing their confidence. Several teacher comments illustrate this. For example, Ann believed that collaborating save time, produced better learning activities and boosted her confidence level. Likewise, Sandra felt that sharing ideas made her a better, more interesting teacher to her students. Jim and Jennifer also mentioned several ways in which collaboration was advantageous for them:

You get to collaborate with other instructors. I thought that was very helpful.

And also share what you are doing in the classroom. Especially with using the Moodle, we are able to import or share plans or activities together. [...] Even, like, things like developing a test - instead of me developing a 100-question test we divided it up, that kind of thing. So what normally took you several hours to make took 25 [minutes] on my part and 25 on another person's. So I felt it was helpful. We were kind of going through it together, but I like the collaboration aspect. It allowed me to focus more on what students were

learning and the - I guess kind of facilitating more than just ... planning and having a teacher-fronted class. (Jim, interview, November 2010).

When we enrolled in each other's [online Moodle] classes as teachers and were able to see everything, I think that was the best part. [...] I like to stay up late and do things at the last minute, so I can go on there and I know that Sandra teaches on Tuesdays in the lab and I teach on Wednesdays, so she is going to have something up there that I can then draw from. But then I am in the lab on Fridays and I can put a quiz up there and Ann can import that quiz for her class on Mondays. (Jennifer, interview, December 2010).

These quotes illustrate that both teachers and students benefited from the collaboration.

Jim's comment, in particular, illustrates how he developed as a teacher and ended up teaching in a less teacher-fronted and, presumably, more student-centered way. Jennifer provided another reason why the collaborative aspect of the study might have played such a prominent role. For her, the challenge of doing something new and more demanding was off-set by the ability to collaborate with the other teachers.

Despite these potential advantages of collaborating among the teachers Harry did not enjoy collaborating in the Spring semester. In fact, after just two planning meetings at the beginning of the semester he announced that he had now planned his writing class for the rest of the semester and that he did not think having any more weekly planning meetings would be useful for him. The other two teachers, one of which was Sandra, who

was participating in the study again, then agreed to not plan together. Harry made the following comments about his experience:

You know, this semester I did things different than I would have in the past.

And I think...it was frustrating for me, and I think part of that was I was trying

to do things different than I would have normally. Part of what was frustrat-

ing for me was doing some team teaching where I was part of a group and I

guess I have been a little bit of a lone ranger in my teaching, and I felt like

that got me off to a slow start. I was kind of waiting to do things together

and I felt like there wasn't a good team approach early on, so that it was

clear where we were going and what we were doing and how we were going

to get there. That was frustrating for me. Were there three of us doing it?

Yeah, and that was, I guess waiting, you know, not feeling that I was the

leader, kind of waiting to do things together, and I felt things got off to a

really slow start, so that was frustrating for me. (Harry, interview, May 2011)

Sandra, in turn, was disappointed about the lack of collaboration during the Spring semester. She clearly preferred a collaborative approach. In fact, when asked about what stood out the most from her experiences in the Spring semester, she commented: "Can I say the fact that we didn't meet together at all? Yeah, that was a big." (Sandra, interview, May 2011).

The teacher comments about collaboration are relevant to at least two of the post-questionnaire items. More specifically, they can help explain the high rating of item 3, *I had*

enough influence on the course content and activities ($M = 4.83, SD = .41$). Most teachers rated this item a (5) *Strongly Agree*. Sandra (Spring) was the only dissenter, who rated it (4) *Somewhat Agree*. The interview comments do not shed any light on why this might be. Interestingly, one might have expected Harry to rate this item lower, but maybe the fact that he was not forced to plan with the other teachers gave him the control he needed.

From these comments and post-questionnaire answers it is clear that most of the teachers valued the collaborative aspect, especially during Fall semester. It helped them plan easier and faster and allowed them to share activities via Moodle. The researcher also observed them sharing classroom activities in person at their weekly planning meetings. Having each other to bounce ideas off of may also have improved the quality of the activities since they gave each other feedback on ideas before actually trying them out. In addition, working together seems to also have made the teachers feel more comfortable in a new and challenging situation. Nonetheless, Harry considered the collaborative aspect a negative factor in the Spring semester. For him, planning alone, ahead of time, was important. He was not comfortable only planning one week ahead. His desire to be in control seems to have been greater than that of the other teacher participants. Sandra also lamented the fact that collaboration did not work out in the Spring. However, she had her previous experience from the Fall semester to draw upon, so it affected her less, she indicated. Having now covered the issues pertaining to collaboration we turn to the final category of teaching impact.

Teaching impact

The category of teaching impact covers the topics of classroom dynamics, efficiency, and workload. Findings for each of these will be presented separately below.

Classroom dynamics

When looking at how the use of a blended learning environment affected what went on in the classroom, the issue of classroom dynamics stands out. In this context, classroom dynamics covers student and teacher interaction and student and teacher attitude to the course activities and each other.

On the issue of student and teacher interaction, the teachers found it easier to provide more personalized, individual assistance to students and keep track of their progress. Comments from Sandra and Jim illustrate this:

Sandra: I like having students work on things when I am there. It is kind of hard in class (regular FTF), you know, to give individual feedback. I feel like, with this I can go in and see what they are doing and give them feedback during class (lab) whereas I may not have time to do that as much.

Researcher: So you use the lab time to try and give students feedback on their work?

Sandra: Yeah, and sometimes I would even talk to them too. Like, while they are working on something I would call them up one at a time and talk to them about their stuff. (Sandra (Spring), interview, May 2011).

I felt this semester, more than last semester without it (BL), that I could actually see what my students were learning or struggling with and provide more specific support in the classroom [...]. (Jim, interview, November 2010).

Turning to student and teacher attitude to the course activities and each other, Jim and Ann both perceived that their students were able to work more autonomously and focused in the computer labs. In Jim's opinion, this was caused by the kinds of activities the teachers could carry out using Moodle features such as discussion forums and other online activities like treasure hunts. According to Jim:

It is very difficult to replicate those things. [...] I think it really changes the students' autonomy. Having them in the lab and using computers, it is not teacher focused, it is more student focused, especially in the labs. (Jim, interview, November 2010).

In addition, Jim found that blended learning made the students more responsible for their own learning, which was also a more satisfying experience for him as a teacher:

Jim: I think one of the things I liked most about it (blended learning) was giving students an opportunity to use technology and to be more in charge of their learning. As an instructor, I felt I was reaching students better because I saw more progress toward, in the learner outcomes that students were doing. (Jim, interview, November 2010).

One of the reasons why the blended learning environment increased the students' autonomy and improved their focus was the BL student training that the teachers carried

out at the beginning of each semester. Both Jennifer and Jim commented on this during their interviews. For example, Jennifer said the following about the impact of the student training:

I think it got them to actually understand that this was a good thing and they were totally on board with that, and they were ready to go after I explained it. [...] We took a couple of class periods to talk about it and the disadvantages of books and paper dictionaries. [...] I think doing that, it made it clear to them that this was necessary. I felt that they really wanted to do this [...]. And I think we also did an essay or a paragraph about comparing and contrasting traditional classrooms and computer online classrooms and I think that was good. [...] It got them to think beyond 'oh, this is what we just talked about in class and now I'm going to write about it. We are going to talk about and we are going to do it,' you know. Yeah, that was actually one of my most favorite things we did, this whole class, it was explaining it to them. (Jennifer, interview, December 2010).

Jim also explained that when he, during the training, demonstrated participation, it had a positive effect on student participation:

One of the things I did to begin with was I put up my picture (in his Moodle profile) and I saw a lot of students put in their picture as well, so I felt like if I participated it also impacted the students as well, and they participated in Moodle. (Jim, interview, November 2010).

However, it was not only the students who had to get used to learning in a BL environment. The teachers also had to get used to the new classroom dynamics, as Jennifer pointed out:

Well, for me it's hard to watch students on the computer not doing what they are supposed to be doing, and so fighting that urge to go talk to them and tell them what to do was really hard. [...] That happened a lot, I felt like, the first few weeks. So I guess self-control, a little bit in that situation [is necessary], just letting them learn independently and learn how to learn independently, you know. (Jennifer, interview, December 2010).

Beyond the student training, Jennifer and Jim also offered some additional reasons why the BL environment might have worked better. These comments center on the amount of lab time available and the types of activities teachers could do with the students:

I felt like having lab twice a week that was just part of, it incorporated technology as part of the class. [...] It felt more disconnected with once a week, like, 'oh, we would just go to lab and use the resource', that kind of thing, that it was so much a part of the class. (Jim, interview, November 2010).

Jim had made a PowerPoint and it was about APA format, which is kind of a dry topic, but something we had to go over. [...] The students watched it on their individual computers and they had some exercises to go with it, comprehension questions, and it went OK. But then the next lab day I had the

students create their own APA format PowerPoint. [...] It worked out well, and I think my students really liked it. They had a prize, you know, the best PowerPoint won a prize, so it was fun. (Jennifer, interview, December 2010).

Efficiency

Another important topic under the category of Teaching Impact is that of efficiency. More specifically, the teachers found blended learning to be more efficient in terms of student learning and in terms of enabling the teachers to monitor student progress. Jim, in particular, was very clear about the benefits that a blended learning environment afforded his students:

I believe my students have mastered more of the learner outcomes this semester than in the past. [...] I think that part, a large part, of that is due to this blended learning and just not having to plan so much and focusing more on student learning to address those learner outcomes more. [...] I felt students also got it, if that makes sense, that they were able to do the outcomes, to paraphrase and summarize. So somewhere in between meeting in the classroom and doing the online Moodle (activities) they were able to master the outcomes better. Between the classroom and also doing activities online, I think that helped out a lot. (Jim, interview, November 2010).

Later, Jim elaborated on this and suggested that one reason they learned better might be because he, as a teacher, could better follow their progress:

Jim: I think [...] having them do activities on lab days and then having that time in between to look and see, 'oh, they didn't quite get this concept' or 'they still need practice with paraphrasing and summarizing,' it was, I think, the feedback for me as a teacher was more. I was focused more on student learning. (Jim, interview, November 2010).

Jennifer also found blended learning to make it easier and more efficient to monitor student progress:

The students liked using the computer and I think that made my job easier. [...] I could see how well they were doing, I could measure their progress, I could see their activity reports. I could actually look very closely at their assignments instead of just saying, 'OK, you did it, check plus.' (Jennifer, interview, December 2010).

Sandra also noted that using blended learning enabled her to plan the students' writing during lab classes, so they could type their essays rather than write them by hand. This made her teaching more effective and her life as a teacher easier. In addition, Sandra noticed that students tended to work more independently, which ties in with Classroom Dynamics. This, in turn, enabled her to cover more material with the students during the semester.

Harry, on the other hand, did not seem to feel the labs were as effective as the other teachers:

Harry (Spring): [...] I think, for me and for my students, [...] that the lab time, I think that a lot of those things I would use as homework. [Those are] things that the students do on their own, but I wouldn't reduce the number of contact hours. I think, especially for learning a language, I just think there is no substitute for personal interaction. And this semester I felt like my students didn't get the face-to-face language learning I really think they need to improve. So [...], I think in the future, I would go back to one day a week with lab work where the students log in and do their work. The other things that are online I would have them do as homework, which is what I have done for years: 'It's here, your materials are available, you do your work and submit it to me.' But we still have class on the regular days. (Harry, interview, May 2011).

Workload

On the topic of workload, which drew a significant amount of comments from the teachers, they were very much in agreement. They felt that BL gives you more work in the beginning with planning and learning the technology. However, in return, the teachers later felt more relaxed, their planning became easier, they had less work, and they predicted that teaching the same course again would be easier. Several teacher interview comments illustrate these teacher perceptions. For example, Ann commented that:

I think it's good for the students, I ... it's good for me too. I think it makes it easier to teach the class. It's a little more work up front, but I've developed a

lot of things I can keep using and they are all right there, so it's conveniently located, it's easy to grade. So I think it's been really good for both them and me. (Ann, interview, November 2010).

Jennifer also pointed out that teachers need to realize that even if teaching part of the class online makes some things easier and more accessible, new tasks may end up taking more time, which you need to plan for.

I'd say, I don't know if it is a disadvantage, but I didn't know how much time [...] grading, for example, or responding to posts, didn't know how much time it would take to do. Because I realized it's awesome, it's all online, I can access it anywhere and it should be easy. But I didn't carve out enough time to do those tasks, to respond to posts and maybe make as many comments as I could have done, I didn't do that in the beginning.

However, both Sandra and Jennifer experienced that once they were more familiar with the technology, their workload was lessened. For example, Sandra, who started out with less knowledge of Moodle than the other teachers, commented that:

It does become easier once you find out how to set things up in the Moodle and how to, how to run it.... It just takes a few minutes after you get it and...it will be nice to just go back in and get all my information right off the Moodle for their learner outcomes and stuff. (Sandra, interview, May 2011).

When we compare the teacher comments about the impact a BL environment had on their teaching to the teacher post-questionnaire ratings they seem most relevant for

three of the items. Starting with item 9, *Using BL did not make this course more demanding to teach* ($M = 4.50, SD = .55$) the comments about workload from Ann, Jennifer and Sandra help explain this rating. The fact that they felt the course was more challenging in the beginning, after which it became easier, bears out their overall perception, which ended up between (4) *Somewhat Agree* and (5) *Strongly Agree*. The comments under Classroom Dynamics may also help explain the ratings for item 11, *My teaching style matches well with BL* ($M = 5.00, SD = .00$). The teachers' positive comments on this topic support this rating. Apparently, even if Jennifer pointed out it took some getting used to, this was not enough to prevent them all from rating this item *Strongly Agree*. Item 10, *I would like to teach other ESL courses using BL* ($M = 5.00, SD = .00$), is the only remaining one. This item sums up the totality of the teachers' experiences, which means their comments from each of the four categories are relevant. As such, it very well illustrates the general sentiment across the many teacher interview comments, namely that the teachers were generally very happy about teaching in a BL environment. The few challenges they did encounter, such as Sandra's lack of technology experience and Harry's need to be more in charge and plan far ahead, were not enough to give them a negative perception of blended learning. Thus, all teachers *Strongly Agreed* that they would like to teach other BL courses. This was also supported by the researcher's observation that all of the teachers tried to use BL in many of their other skills courses both during and after their participation in the study.

Summary

In summary, the data revealed that the participating teachers felt they got the pedagogical and technical training and support they needed throughout both semesters. More specifically, the teachers commented that the blended learning pedagogical training was a good motivator because they felt they needed to understand why they were supposed to use blended learning. The organization of the planning process was also an important factor. Being prepared in advance and planning their classes collaboratively were benefits mentioned by most teachers. One teacher, however, did not enjoy the collaborative planning and opted out of it during the Spring 2011 semester. In terms of teaching impact the teachers generally felt that using blended learning was more demanding at the beginning of the semester, but that it was made up for by subsequently being easier and more efficient. The teachers also found that using a BL environment enabled them to provide better, individual feedback to students and keep better track of student progress. In turn, students were more focused and autonomous in their studies. Finally, the teachers found that using blended learning enabled them to cover more material and that their students learned more and better in the blended learning environment.

RQ 2: How do students describe the productiveness of the blended learning environment in an IEP writing course?

This question seeks to determine how well students think they learn ESL writing in a BL environment. Several data sources provided information that helped answer this question. Presented first is the quantitative data from the WEBLEI questionnaire. The

students' ratings of the environment on the four scales of the modified WEBLEI provided a detailed picture of how they felt about the issues of Access, Interaction, Response and Results. For each scale, the mean and standard deviation is listed in a table, together with the mean and standard deviation for each of the items that make up that scale. With each table, individual items that contribute to, or detract from, the rating is discussed. In addition, items 1 – 19 of the questionnaire are presented together with the relevant WEBLEI parts. These items are not part of the WEBLEI, but were added to help triangulate the WEBLEI data. Presented second are the qualitative data gathered from student and teacher interviews and from the researcher classroom observations. They serve to provide additional insight into the student and teacher experiences and also enable triangulation of the results from the quantitative data.

The participants in this study were 41 level 4 and 5 ESL writing students. The mean obtained for each of the 4 modified WEBLEI scales was between 3 and 4 on a Likert scale that includes the following levels, from 1 through 5: (1) Almost Never, (2) Seldom, (3) Sometimes, (4) Often, and (5) Almost Always. A mean of three indicates that students believed that the topic of the question was sometimes the case, while a mean of four suggests that they believed it was often the case.

Turning first to the results for the Access scale, an overall mean of 3.57 ($SD = .56$; see Table 9) for this scale suggests that students rated these items more towards *Often* than *Sometimes*. Access covers the necessary prerequisites for studying in a BL environment, namely access to the on-campus classes and online materials. The highest mean responses

were for item 20 ($M = 3.76$, $SD = .80$), item 21 ($M = 3.98$, $SD = .79$), and item 22 ($M = 3.71$, $SD = .87$) (see table 9). These responses indicate that the learning activities were often available to students at times and locations that were suitable and convenient for them, and that they could often work at their own speed. This contrasts with the two items that had the lowest mean ratings, items 23 ($M = 3.37$, $SD = .83$) (see table 9) and 25 ($M = 3.37$, $SD = .89$) (see table 9). The mean rating of item 23 is not surprising, given that the course teachers usually set the learning agenda in the regular classroom and online. Likewise, the mean rating of item 25 likely reflects the fact that some students in the program believe their courses should focus almost exclusively on TOEFL test preparation. This sentiment was also evident in some of the student interviews, which will be discussed later.

Table 9. WEBLEI Scale 1 and individual items

	M	SD	N
(1) Access	3.57	0.56	41
20. I can access the learning activities at times convenient to me	3.76	0.80	41
21. The online material is available at locations suitable for me	3.98	0.79	41
22. I am allowed to work at my own speed to achieve learning objectives	3.71	0.87	41
23. I decide how much I want to learn in a given period	3.37	0.83	41
24. I decide when I want to learn	3.41	1.02	41
25. Using Blended Learning allows me to meet my learning goals	3.37	0.89	41
26. Using Blended Learning allows me to explore my own areas of interest	3.41	0.92	41

Adding to the results from the Access scale are questionnaire items 2 ($M = 3.73$, $SD = .74$) and 5 ($M = 3.88$, $SD = .75$) (see Table 10). These items indicate that the students Somewhat Agreed that both the online and classroom activities helped them learn. Interestingly, a total of 78.1% of the students either *Somewhat Agreed* or *Strongly Agreed*

that the online activities helped them learn while 75.6% *Somewhat Agreed or Strongly Agreed* that the classroom activities helped them learn.

Table 10: Questionnaire items related to the Access scale

	<i>M</i>	<i>SD</i>	<i>N</i>
2. The online activities helped me learn	3.73	0.74	41
5. The classroom activities helped me learn	3.88	0.75	41

Note: Likert scale: (1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither Agree or Disagree, (4) Somewhat Agree, and (5) Strongly Agree.

The results for the Interaction scale, which covers learner interaction with one another for the purpose of achieving the stated learning outcomes, were slightly higher. With an overall mean score of 3.63 ($SD = .55$; see Table 11) student ratings indicate that they were closer to believing that they often experienced productive participation, collaboration, and cooperation in the blended learning environment. One lower-scoring item was 27 ($M = 2.93$, $SD = 1.17$), which indicates that students did not very frequently communicate electronically with other students. Considering that students met in a classroom or lab each day, it is reasonable to assume they communicated in person instead. In contrast, the relatively high mean score for item 29 ($M = 4.22$, $SD = .82$), indicates that students often felt their teachers were accessible and approachable. In fact, 80.5% of the students indicated that they often or almost always had the freedom to ask their teacher about what they did not understand. In addition, responses to items 30 ($M = 3.73$, $SD = 1.00$), and 34 ($M = 3.85$, $SD = .82$) indicate that students often found their classmates positive, supportive and approachable with regard to academic topics. For item 30, 68.3%

responded that they often or almost always had the freedom to ask other students what they did not understand. For item 34, 69.7% of the students indicated they were often or almost always supported by a positive attitude from their classmates.

Table 11. WEBLEI Scale 2 and individual items

		M	SD	N
(2) Interaction		3.63	0.55	41
27. I communicate with other students in this subject electronically (email, discussion forums)		2.93	1.17	41
28. In this Blended Learning environment, I have to be self-disciplined in order to learn		3.56	0.71	41
29. I have the freedom to ask my teacher what I do not understand		4.22	0.82	41
30. I have the freedom to ask other students what I do not understand		3.73	1.00	41
31. Other students respond promptly to my requests for help		3.59	0.77	41
32. I am regularly asked to evaluate my own work		3.59	0.97	41
33. My classmates and I regularly evaluate each others' work		3.61	0.95	41
34. I was supported by a positive attitude from my classmates		3.85	0.82	41

The Response scale measured the students' sense of satisfaction, enjoyment, ability to collaborate, and sense of boredom while learning in the blended learning environment. It received the lowest overall mean rating of 3.45 ($SD = .55$; see Table 12) of any of the subscales. While no individual item scores dropped below three ('Sometimes' on the questionnaire Likert scale), item 36 ($M = 3.41$, $SD = .84$), item 41 ($M = 3.34$, $SD = .97$), and item 42 ($M = 3.05$, $SD = 1.07$) had relatively low scores. For items 36 and 41 this indicates some uncertainty on the part of the students with regard to their feeling of satisfaction, achievement, and interest, in the blended learning environment. The fact that as many as 43.9% of the students *sometimes* felt a sense of satisfaction and achievement (item 36) may

indicate that the course was challenging for many students. Nonetheless, 39.0% *often* felt this way, which indicates that a large portion of the students felt good about the course. For item 42, the low rating is a positive result that suggests that students only occasionally felt bored towards the end of the semester. The distribution of student ratings on this item shows that 53.7% of the students Sometimes felt bored towards the end of the semester while 22% Seldom or Almost Never did. In item 40 ($M = 3.73$, $SD = .78$) students reported they often worked together on group projects.

Table 12. WEBLEI Scale 3 and individual items

	M	SD	N
(3) Response	3.45	0.55	41
35. Using Blended Learning makes me able to interact with other students and the teacher asynchronously	3.56	0.84	41
36. I felt a sense of satisfaction and achievement about this Blended Learning environment	3.41	0.84	41
37. I enjoy learning in this Blended Learning environment	3.54	0.95	41
38. I could learn more in this Blended Learning environment	3.56	0.90	41
39. It is easy to organize a group for a project	3.44	1.00	41
40. It is easy to work together with other students involved in a group project	3.73	0.78	41
41. The Blended Learning environment held my interest throughout the course	3.34	0.97	41
42. I felt bored with this course when we got to the end of the semester	3.05	1.07	41

Several other questionnaire items add to the Scale 3, Response, results. Interestingly, the students rated the online activities in item 1 ($M = 3.80$, $SD = .95$) and the computer lab learning in item 3 ($M = 3.83$, $SD = 1.00$) slightly higher than the classroom activities in item 4 ($M = 3.66$, $SD = .86$) and the classroom learning in item 6 ($M = 3.56$, $SD = .81$). However, all four ratings are approaching or close to *Somewhat Agree*. In terms of the

language skills the students felt they learned in the course, they rated writing skills highest in item 8 ($M = 3.98$, $SD = 1.10$). In fact, 78% of the students *Somewhat Agreed or Strongly Agreed* that the course improved their writing skills. The students also rated item 7 ($M = 3.41$, $SD = .78$), item 9 ($M = 3.10$, $SD = .92$), and item 10 ($M = 3.37$, $SD = .97$), which elicited their reading, speaking, and listening skill improvements, respectively, reasonably high, even though the course did not explicitly focus on these skills.

Table 13: Questionnaire items related to the Response scale

	<i>M</i>	<i>SD</i>	<i>N</i>
1. I liked the online activities.	3.80	0.95	41
3. I liked learning in the computer lab.	3.83	1.00	41
4. I liked the classroom activities.	3.66	0.86	41
6. I liked learning in the classroom.	3.56	0.81	41
7. This course improved my reading skills.	3.41	0.89	41
8. This course improved my writing skills.	3.98	1.10	41
9. This course improved my speaking skills.	3.10	0.92	41
10. This course improved my listening skills.	3.37	0.97	41

Note: Likert scale: (1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither Agree or Disagree, (4) Somewhat Agree, and (5) Strongly Agree.

For the Results scale, which elicited student opinions about what they gained from learning in a BL environment, the overall mean was 3.75 ($SD = .68$; see Table 14). Looking at some of the individual items we see from item 43 ($M = 3.73$, $SD = .81$), that students often believed they could establish the purpose of the lessons. Item 44 ($M = 3.78$, $SD = .88$) also indicated the lessons were easy to follow. Moreover, the ratings for item 46 ($M = 3.88$, $SD = .78$), item 47 ($M = 3.93$, $SD = .91$), and item 48 ($M = 3.83$, $SD = .97$) demonstrated that students understood the expectations of the assignments, felt that activities and content were

generally well-planned and clear, and that learning writing in a blended environment often worked well. Other items, such as 45 ($M = 3.56$, $SD = .84$), and 50 ($M = 3.56$, $SD = .95$), imply students were a little less certain about the ability of the BL structure to keep them focused on the course objectives and about the ability of the quizzes to enhance their learning process. However, the means for these two items still approach 'often' on the student post-questionnaire Likert scale.

Table 14. WEBLEI Scale 4 and individual items

	M	SD	N
(4) Results	3.75	0.68	41
43. The learning objectives are clearly stated in each lesson	3.73	0.81	41
44. The organization of each lesson is easy to follow	3.78	0.88	41
45. The structure of the Blended Learning environment keeps me focused on what is to be learned	3.56	0.84	41
46. Expectations of assignments are clearly stated	3.88	0.78	41
47. Activities are planned carefully	3.93	0.91	41
48. The content of my Writing 4/5 course worked well in a Blended Learning environment	3.83	0.97	41
49. The presentation of the writing 4/5 content was clear	3.73	0.87	41
50. The quizzes enhance my learning process	3.56	0.95	41

Various other questionnaire items provide additional information about issues related to Scale 4, Results. Item 11 ($M = 3.61$, $SD = 1.24$) and item 12 ($M = 3.88$, $SD = 1.14$) indicate that the students *Somewhat Agreed* that there was a good balance between the online and classroom activities and that these activities worked well together. The students also *Somewhat Agreed* that they understood why the course mixed online and classroom activities in item 14 ($M = 3.95$, $SD = 1.00$), which provides a measure of the effectiveness of

the student training that the teachers carried out at the beginning of the course. In terms of technical support, the students *Somewhat Agreed* they got what they needed in item 13 ($M = 3.85, SD = 1.11$) and also indicated that obtaining this technical support was *Somewhat Easy* in item 18 ($M = 3.90, SD = .92$). For item 17 ($M = 3.51, SD = .78$) the students rated the instructions for the online activities as *Somewhat Easy* to understand. Lastly, for item 15 ($M = 3.49, SD = 1.14$) 29.3% of the students indicated that they *Neither Agreed or Disagreed* that they would like their other English courses taught like this course, while 34.1% *Somewhat Agreed* and 19.5% *Strongly Agreed*.

Table 15: Questionnaire items related to the Results scale

	<i>M</i>	<i>SD</i>	<i>N</i>
11. There was a good balance between online and classroom activities.	3.61	1.24	41
12. The online and classroom activities worked well together.	3.88	1.14	41
13. I got the technical support I needed during this course.	3.85	1.11	41
14. I understand why this course mixed online and classroom activities.	3.95	1.00	41
15. I would like my other English courses to be taught like this course.	3.49	1.14	41
17. The instructions for the online activities were...	3.51	0.78	41
18. Getting technical support was...	3.90	0.92	41

Note: Items 11-15 Likert scale: (1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither Agree or Disagree, (4) Somewhat Agree, and (5) Strongly Agree. Items 17-18 Likert Scale: (1) Difficult, (2) Somewhat Difficult, (3) Not Easy or Difficult, (4) Somewhat Easy, and (5) Easy.

Having now presented the available questionnaire data relevant to this question we turn to the qualitative data that were collected. These data come from student post-treatment interviews, end-of-semester teacher interviews, and researcher classroom observations. The data are organized according to four categories that were discovered in the data during data analysis: 1) Learner Access, 2) Learner Self-Discipline, 3) Learner

Attitude, and 4) Technology Issues. To facilitate data triangulation these categories are presented in an order relevant to the four WEBLEI scales (Access, Interaction, Response, and Results). However, a few categories do cover items from more than one WEBLEI Scale. These items and scales are listed whenever relevant.

Learner access

The category of Access centers on student access to the learning materials. It is composed of several subtopics such as study pacing, perceived convenience, and study conditions. These and other subtopics are demonstrated via student interview quotes. First of all, two students in Ann's class commented that they could work faster in the lab classes when they, themselves, could set the pace. As one of them said:

Researcher: [...] What made the online activities better?

Student: More convenient - you don't have to wait for others - it's more individual. (Ann, student interview, November 2010)

One of Sandra's students also commented that she could work faster and had time to finish her homework when she was in a lab class.

The topic of convenience mentioned by Ann's student above was also brought up by another one of Ann's students and one of Jennifer's. For example, Ann's student said that:

Using the computer is convenient because we can search the information very ... we don't need to go to the library or see the newspaper to research the information, just searching online. (Ann, student interview, November 2010).

These comments from Ann, Jennifer, and Sandra's students support the student ratings of item 20 ($M = 3.76, SD = .80$), item 21 ($M = 3.98, SD = .79$), and item 22 ($M = 3.71, SD = .87$) (see table 9) which are all part of Scale 1, Access. These item ratings signal that the students felt that the learning activities were often available to them at times and locations that were suitable and convenient for them, and that they could often work at their own speed.

Learner self-discipline

Comments related to the issue of *Learner Self-Discipline* showed up several times in interviews with both students and teachers. This category centers on the students' ability or inability to concentrate on the course topics and assignments in the BL environment. Three different students commented that the distractions offered by easy access to entertainment or social networking websites during lab time could be a disadvantage. One of Sandra's Fall students put it like this:

Sometimes we cannot concentrate on the class because [...] I, sometimes I

play, search the internet for other things, so I think that is disadvantage.

(Sandra (Fall), student interview, November 2010).

Jennifer and Harry also noticed that students were sometimes distracted. Jennifer described it nicely, together with the consequences students faced in her class, if they were caught visiting websites not related to their assignments:

Jennifer: So I had a problem with them at the beginning of the semester going

to other websites and so I told them, "If you go to other website and I see it,

you are going to get a zero for the day, you are getting an 'absent'."... And so

they would blatantly go on to Facebook.

Researcher: So that could maybe be a disadvantage for the students, that they are more easily distracted?

Jennifer: Yeah I think it was, yeah. And it's also a disadvantage because they got counted as absent when they probably wouldn't have, if they were in the classroom. (Jennifer interview, December 2010).

Ann also commented that it was important that students take responsibility for themselves and show more maturity and focus:

I also think some students, the students who are a little less mature and a little less focused, they don't know when their assignments are due because they don't take responsibility for themselves. If you are absent on a lab day your assignment is right there (in Moodle). I expect you to go in and do it for homework and bring it to class or do whatever you are supposed to do. (Ann interview, November 2010).

It is, however, important to also recognize that not all students lacked self-discipline. For example, when the researcher asked Ann what challenges she faced when creating activities and implementing the blended learning course, she answered that she did not have much of a problem with students not doing what they were supposed to be doing during lab classes. In fact, she believed it helped her to know that on lab days the students would be more engaged. In the same vein Sandra commented that her Fall

semester students seemed more independent and ascribed it to the use of BL. She also felt she could do more with them than she would otherwise have been able to.

These interview findings contrast somewhat with student responses to item 28 *In this Blended Learning environment, I have to be self-disciplined in order to learn (M = 3.56, SD = .71)*. More specifically, it is puzzling that this score is somewhat lower than most of the other scores for Scale 2, Interaction, when one considers that self-discipline was, in fact, needed in order to learn effectively. In addition to the teacher and student comments listed above the researcher himself also observed several instances in all course sections in which students were clearly off-task during both classroom and lab classes. One can speculate that some students may not yet be mature enough to realize to what extent college study requires the individual learner to be responsible for his or her own learning.

Learner attitude

The category of Learner Attitude focuses on learner feelings about studying in a BL environment. Topics covered under this category include conveniences and advantages pointed out by the learners, as well as disadvantages and desires for a change in focus. In general, students in most classes believed that computers can help them meet their learning goals and that studying with the aid of a computer is effective and interesting. Students also mentioned the advantages of practicing how to type in English and how to use a computer for university studies. In addition, many students believed that since the internet-based TOEFL test (iBT) requires students to use a computer to take the test, learning to write essays using a computer helps prepare them for the test. Lastly, however,

some students also felt that typing a lot was a challenge and that the course should focus more on test preparation. These findings are all illustrated by the following student comments:

I use the computer. I found the difficult things I can search online - it is an advantage, I can search online. (Jennifer, student interview, November 2010).

I think I would recommend [this course] for my friend because it have a blend learning so you will learn from computer and from the teacher. It is the same way that a university way, so sometime they have the online courses, so you will have a background about what is going [on] in university. (Jim, student interview, November 2010).

Student: I think I would recommend this [class] because when we use the lab we will finish our homework early and as we know that we will have exam online in the end this semester [...] we need to practice more to use the computer. (Sandra (Spring), student interview, April 2011).

These findings help provide details about the students ratings of item 36 *I felt a sense of satisfaction and achievement about this Blended Learning environment* ($M = 3.41$, $SD = .84$) and item 37 *I enjoy learning in this Blended Learning environment* ($M = 3.54$, $SD = .95$). In addition, the student comments mainly focus on computers and online learning, which supports the student ratings of item 1, *I liked the online activities* ($M = 3.80$, $SD = .95$), item 3, *I liked learning in the computer lab* ($M = 3.83$, $SD = 1.00$), and item 8, *This course improved my writing skills* ($M = 3.98$, $SD = 1.10$). The above quotes from the student

interviews also help explain the relatively high mean for item 48 *The content of my Writing 4/5 course worked well in a Blended Learning environment (M = 3.83, SD = .97)*. Another issue relevant to item 48 is the fact that the students found it helpful to practice typing in English, which many, apparently, had limited experience with. This is illustrated by the following quotes:

I think the most advantage in this class, online classes, is we will type faster when we do TOEFL test. We need to do the test online like we will have two different types of writing. (Sandra (Spring), student interview, April 2011).

Student 1: For our future study... you can [learn] how to write essay [and] in the iBT we should type, so I think it is useful. (Ann, student interview, Nov 2010).

In his course section Jim also set up weekly online journals where students took turns at selecting a topic for debate and encouraging debate among their classmates. This was a popular move and two of his students commented that:

Student 1: I would recommend this course because we can share our opinion online. I think [that] is easier for us. (Jim, student interview, November 2010).

Student 2: It is a good way to study English and [I] like the journal and other things (other assignments). (Jim, student interview, November 2010).

Considering that Jim was the only teacher who set up this kind of journal this might explain the relatively low score for item 27, *I communicate with other students in this subject electronically (email, discussion forums) (M = 2.93, SD = 1.17)*, which is part of Scale 2,

Interaction. However, while many students found advantages to learning in a BL environment, some also pointed out disadvantages. For example, some students found it challenging to have to type a lot in English:

For me I think there is a disadvantage with the typing because I am very slowly in the typing. So it will be hard for a new student who is usually writing by his hand on paper. So this is the first disadvantage will face the student in writing course. (Jim, student interview, November 2010).

Other students would have preferred a more test-oriented course focus. When asked by the researcher how they thought the class could be improved, they replied:

Student 1: More stuff about TOEFL.

Student 2: And more like writing about TOEFL topics.

Student 1: More about the TOEFL test and speaking skills. (Jennifer, student interview, Nov 2010).

One of Sandra's Spring students elaborated on this, and made it clear he thought students should be practicing how to write TOEFL essays, not college-style essays:

Student: I think the goal of IEOP is to teach us how to pass TOEFL and we learn, study in IEOP to pass the TOEFL. And I think the writing class just teach[es] us how to write the academic article for, like, the University - we [just] need to, like, [write] some essay in the structure like that, not the structure, like, how the TOEFL writing. They are different. (Sandra, student interview, April 2011).

Student opinions like these, about the focus of the course, may help have affected the ratings of several items from different scales. For example, item 25 *Using Blended Learning allows me to meet my learning goals (M = 3.37, SD = .89)*, item 36 *I felt a sense of satisfaction and achievement about this Blended Learning environment (M = 3.41, SD = .84)*, item 41 *The Blended Learning environment held my interest throughout the course (M = 3.34, SD = .97)*, and item 45 *The structure of the Blended Learning environment keeps me focused on what is to be learned (M = 3.56, SD = .84)* may all have been affected negatively. More specifically, students may have felt that the course did not address their learning goals, which would make it difficult for them to feel a sense of satisfaction and achievement about the BL environment. In addition, it would have been more difficult for the BL environment to hold the student' interest and keep them focused throughout the semester. Thus, while students may have had several subjective reasons for liking or disliking the blended learning environment in their intensive English writing classes they had very few complaints about the more mechanical or technical aspects of the course. We now turn to these issues.

Technical issues

The few technical issues faced by the students centered on two things: The use of their personal computers at home and those in the different labs. More specifically, one of Jim's students had a problem with his computer at home, which, for a short while, prevented him from accessing the online Moodle environment. Several of Ann's students also

experienced problems with the machines in their assigned computer lab. The researcher also confirmed these problems during observation sessions:

Student: Sometimes, when the computer doesn't work we lose our time.

Researcher: So the computers are too slow sometimes?

Student: Yes.

(The rest of the students being interviewed agree). (Ann, student interview, November 2010).

These negative experiences may have had an impact on student ratings of item 20 *I can access the learning activities at times convenient to me* ($M = 3.76, SD = .80$), item 21 *The online material is available at locations suitable for me* ($M = 3.98, SD = .79$), and item 45 *The structure of the Blended Learning environment keeps me focused on what is to be learned* ($M = 3.56, SD = .84$), though it is difficult to determine with any certainty. Likewise, student ratings of item 13, *I got the technical support I needed during this course* ($M = 3.85, SD = 1.11$), and item 18, *Getting technical support was [Somewhat Easy]* ($M = 3.90, SD = .92$) may have been affected by these problems. However, these ratings also suggest that the students felt they received help when they needed it.

Summary

In sum, the student ratings on several items from the various scales of the WEBLEI questionnaire provided data on how the students perceived the productiveness of the blended learning environment in their individual course sections. The categories from the student and teacher interview data, together with the researcher's classroom observations,

also provided valuable details on positive and negative aspects of the students' experience. Generally, the data from the WEBLEI questionnaire signaled that the students had a positive view of the productiveness of the blended learning environment. The interview data uncovered four categories that appeared to be salient in the students' experience. The first of these categories, Learner Access, made it clear that the students appreciated the convenience of setting their own study pace and working independently in the labs. The second, Learner Self-Discipline, found that both teachers and students agreed that students were sometimes distracted in the computer labs. Thus, learner self-discipline was found to be an important factor for students to gain the most from learning in a BL environment. Learner Attitude, the third category, focused on the advantages and disadvantages of studying in a BL environment. Students generally felt that computers could help them meet their learning goals and that studying with the aid of a computer was effective and interesting. However, they also found it challenging to type a lot in English and some felt the course should have had more of a test preparation focus. Finally, the fourth category centered on Technology Issues of learning in a BL environment. These issues were not frequent, but still deserve attention. Having now presented the data available for research question 3 we turn to the fourth research question, which centers on student perceptions of their teachers.

RQ 3: How do students perceive their teacher's practice and behavior in a BL environment?

This question seeks to determine how students view their teacher's practice and behavior in the classroom. The goal is to try to determine if students' perception of their

teacher affects the way in which they view and rate their BL environment. Several data sources provided information that helped answer this question. Presented first is the quantitative data from Scale 5 on the WEBLEI questionnaire. For Scale 5, the students' ratings for all of the teachers combined are presented first. Second, the mean and standard deviation values for each teacher is presented. Third, the teachers' individual ratings for each item on Scale 5 are listed. For each table, the individual results are discussed or compared in an effort to highlight the most salient parts of the data. Presented second are the qualitative data gathered from student and teacher interviews and from the researcher classroom observations. They serve to provide additional insight into the students' experiences of teacher practice and behavior beyond that which was obtained through Scale 5 on the WEBLEI questionnaire and thus enable triangulation of the results.

The students rated the five teacher participants using Scale 5 on the WEBLEI questionnaire. Scale 5, Facilitation, was added to the standard WEBLEI questionnaire for the purposes of determining how well the teachers did their job in the eyes of the students. Thus, these scores provide a detailed picture of how the students perceived their teacher's practice and behavior. As was explained in detail in Chapter 3, Scale 5 was developed based on Chickering and Gamson's (1987) and Chickering and Ehrmann's (1996) discussion of the Seven Principles of Good Practice in Undergraduate Education posed by Chickering and Gamson (1987). These principles "rest on 50 years of research on the way teachers teach and students learn, how students work...with one another, and how students and faculty talk to each other" and "are intended as guidelines for faculty members, students, and

administrators... to improve teaching and learning" (Chickering & Gamson, 1987, p. 4). In this study, Scale 5 received the highest mean rating of 4.15 ($SD = .69$; see Table 16) among the five sub-scales which suggests that the teachers were often behaving in a way that is consistent with good practice in the undergraduate classroom as outlined by Chickering and Gamson (1987). The scores on the individual items help give a more detailed picture of how the students perceived their teachers.

First, we turn to the three items with the highest ratings, namely 51 ($M = 4.41, SD = .71$), 55 ($M = 4.27, SD = .81$), and 56 ($M = 4.27, SD = .84$). These results demonstrate that the teachers were well-prepared and attentive to student needs, focused on their work in the classroom, and challenged the students to perform at their best. This contrasts with the two items that had the lowest mean ratings, items 53 ($M = 3.88, SD = .95$) and 57 ($M = 4.02, SD = 1.01$). While these item ratings are not low in an absolute sense, the comparatively lower ratings seem to indicate students may have been less happy with the teachers' performance in terms of encouraging them to learn in different ways and respecting their individual way of learning. The qualitative data provides more details about why this might be and is presented and discussed later. Turning to item 54, *The teacher gives me quick comments on my work* ($M = 4.05, SD = .87$) this rating is interesting because a writing class often involves a lot of commenting and feedback by teachers on student essays and online postings. This means there is a greater potential for students to notice if teachers do a particularly good or bad job of this. The students' rating for this item suggests that the teachers *Often* gave them quick comments on their work. However, the qualitative data revealed some

differences between the individual teachers, which are presented later. Lastly, item 52 ($M = 4.17$, $SD = .89$) focuses on the extent to which the teachers encouraged the students to work together and help each other. The student ratings indicate that this was *Often* the case.

Table 16: WEBLEI Scale 5 and individual item ratings

	<i>M</i>	<i>SD</i>	<i>N</i>
(5) Facilitation	4.15	0.69	41
51. The teacher is prepared and available to answer my questions	4.41	0.71	41
52. The teacher encourages students to work together and help each other	4.17	0.89	41
53. The teacher encourages me to learn in different ways	3.88	0.95	41
54. The teacher gives me quick comments on my work	4.05	0.87	41
55. The teacher is focused on our work during class time	4.27	0.81	41
56. The teacher expects me to do my best	4.27	0.84	41
57. The teacher respects my individual way of learning	4.02	1.01	41

Note: WEBLEI Likert scale: (1) Almost Never, (2) Seldom, (3) Sometimes, (4) Often, and (5) Almost Always.

Even if the average teacher ratings for Scale 5 are high, this research question also aims to discover if there are any differences between the individual teachers. As can be seen in Table 17, there were clear differences between the teachers' total scores. Harry and Sandra (during both Fall and Spring) received very high ratings while Jennifer, Jim, and Ann had somewhat lower ratings. Note, however, that all ratings were quite good, regardless of their individual rankings.

Table 17. Mean and standard deviation values for individual teachers on Scale 5, Facilitation

	Ann	Jim	Jennifer	Sandra (Fall)	Harry (Spring)	Sandra (Spring)
Mean	3.79	3.93	4.04	4.40	4.30	4.40
SD	0.85	0.76	0.51	0.74	0.73	0.50
N	6	6	7	6	11	5

In order to determine if there was a statistically significant difference between how the students rate their teachers on Scale 5, Facilitation, an ANOVA was performed. It showed no significant teacher difference for Scale 5, Facilitation, $F(5, 35) = .868, p = .51$. Thus, despite the relative differences in how the students rated their teachers, we cannot, with sufficient confidence, say that there is a difference in how the students view their teacher or that these relative differences would extend to the general population of learners and teachers.

In order to better be able to compare the individual teachers, their ratings on the individual items within Scale 5 are listed in Table 18. The possible significance of some of these individual teacher differences will be discussed in the qualitative data section. Note that either Harry or Sandra had the highest score for each item. This demonstrates that their performance was consistently good and that their high ratings were not the result of very good performance in some areas at the expense of others.

Two additional questionnaire items are also relevant for this question, namely items 16 and 19. These items are not part of the modified WEBLEI questionnaire, but are questions that were included to help gauge student perceptions of their teachers. The students' ratings of item 16 ($M = 4.07, SD = 1.01$) and item 19 ($M = 4.15, SD = .99$) indicate

that the teachers projected enthusiasm for the class to the students and that they communicated well with their students.

Table 18. Teacher ratings on individual Scale 5 items

		Item 51	Item 52	Item 53	Item 54	Item 55	Item 56	Item 57
Ann	<i>M</i>	4.00	3.67	3.50	4.00	3.83	3.83	3.67
	<i>SD</i>	0.63	1.03	1.05	0.89	0.75	0.75	1.37
Jim	<i>M</i>	4.67	4.00	3.33	4.00	4.33	3.83	3.33
	<i>SD</i>	0.52	0.89	1.03	0.89	0.82	1.17	1.37
Jennifer	<i>M</i>	4.29	3.86	4.00	3.86	4.14	4.29	3.86
	<i>SD</i>	0.76	0.69	0.58	0.38	0.69	0.76	0.69
Sandra (Fall)	<i>M</i>	4.67	4.50	4.00	4.33	4.67	4.33	4.33
	<i>SD</i>	0.82	0.84	1.10	0.82	0.82	0.82	0.82
Harry	<i>M</i>	4.27	4.64	4.09	4.09	4.18	4.36	4.45
	<i>SD</i>	0.79	0.67	1.04	1.22	0.98	0.81	0.82
Sandra (Spring)	<i>M</i>	4.80	4.00	4.20	4.00	4.60	5.00	4.20
	<i>SD</i>	0.45	1.22	0.84	0.71	0.55	0.00	0.84

Note: Highest scores have been bolded.

Table 19: Student ratings of items 16 and 19

	M	SD	N
16. My teacher seemed like he/she liked to teach this class ^a	4.07	1.01	41
19. Understanding my teacher's directions in the classroom was... ^b	4.15	0.99	41

^a Item 16 Likert scale: (1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither Agree or Disagree, (4) Somewhat Agree, and (5) Strongly Agree. ^b Item 19 Likert Scale: (1) Difficult, (2) Somewhat Difficult, (3) Not Easy or Difficult, (4) Somewhat Easy, and (5) Easy.

In terms of individual teacher performance on items 16 and 19 the results (See Table 20) show very clear differences between some of the teachers. These results will be discussed in more depth in the qualitative data section.

Table 20. Individual teacher ratings on items 16 and 19

		Item 16	Item 19
Ann	<i>M</i>	3.67	3.17
	<i>SD</i>	0.52	0.75
Jim	<i>M</i>	3.83	3.33
	<i>SD</i>	1.60	1.37
Jennifer	<i>M</i>	4.29	4.29
	<i>SD</i>	0.76	0.95
Sandra (Fall)	<i>M</i>	4.17	4.33
	<i>SD</i>	1.17	0.82
Harry	<i>M</i>	4.09	4.64
	<i>SD</i>	1.14	0.51
Sandra (Spring)	<i>M</i>	4.40	4.80
	<i>SD</i>	0.55	0.45

Note: Highest scores have been bolded.

Having now presented the questionnaire data relevant to this question we turn to the qualitative data that were collected. These data come from student post-treatment interviews, end-of-semester teacher interviews, and researcher classroom observations. The data are organized according to four categories that were discovered in the data during data analysis: 1) Organization, 2) Communication, 3) LMS Utilization and Online Activities, and 4) Teacher Feedback. During the presentation of these categories links to the relevant questionnaire items are provided in an effort to triangulate the findings from the two sources.

Before looking at the results from the qualitative data it is important to realize that not all students commented on their teacher. This is likely due to the fact that the interview

questions did not specifically inquire about the students' views of their teachers. However, students were asked to speak about positive and negative aspects of the course and encouraged to provide suggestions for improvements. It was typically when answering these questions that students would offer a remark about their teacher, though not everyone did.

Organization

The category of organization centers on the teachers' level of preparedness and focus during classroom sessions and their ability to guide their students' learning. Both Jennifer's and Sandra's student made positive comments about their teachers' practice in these areas. For example, Sandra's students remarked that they liked how she divided essay assignments into different parts so that background paragraphs and body paragraphs were written on different days. One of Jennifer's students made a similar comment:

Yeah, I want to express [...] this semester, this writing 4 improve my writing skill. Yeah, all our class need to do that. You don't know, like last semester, the teacher maybe give you a topic you can maybe write on this topic, ok, ok. But this semester, teacher gave topic and we will talk [about] this topic. You can [practice] how to write down your opinion, your idea, and how to organize something. And then teacher will help you to get better. I think, yeah, this class is better. (Jennifer, student interview, November 2010).

These comments are supported by the researcher's classroom observations. His observations indicate that all of the teachers were very involved with their students' work

and academic performance and often encouraged them to make an effort to learn and improve. The teachers were generally also very focused on actively teaching the students during regular classroom sessions. During lab sessions the teachers were good at giving the students the directions and guidance they needed in order to work independently while being available to answer questions and assist students. For Jennifer, in particular, the researcher also noticed that she usually made a big effort to introduce new topics and tasks carefully and scaffold them to ensure that all students understood what they were supposed to do.

These interview comments and researcher observations are backed up by the teacher ratings on item 16, *My teacher seemed like he/she liked to teach this class* ($M = 4.07, SD = 1.01$), item 51, *The teacher is prepared and available to answer my questions* ($M = 4.41, SD = .71$), item 55, *The teacher is focused on our work during class time* ($M = 4.27, SD = .81$), and item 56, *The teacher expects me to do my best* ($M = 4.27, SD = .84$). In fact, Jennifer received her highest ratings on items 51 ($M = 4.29, SD = .76$), 55 ($M = 4.14, SD = .69$), and 56 ($M = 4.29, SD = .76$). Likewise, Sandra's ratings for Spring 2011 on items 16 ($M = 4.40, SD = .55$), 51 ($M = 4.80, SD = .45$), 55 ($M = 4.60, SD = .55$), and 56 ($M = 5.00, SD = .00$) were some of her highest, mention the highest ratings between the participant teachers.

Communication

The topic of communication covers two aspects of student and teacher communication. The first centers on how well the teachers give directions. The second focuses on student difficulties understanding their teachers' oral English. In terms of

teacher directions Jennifer's and Sandra's students commented positively on both of them, saying that they always made sure to give their students good directions. This was confirmed by the researcher's observations. All teachers were observed as giving good directions though Jennifer did stand out as one of the best, as previously described. In terms of oral communication problems some students from Ann's, Jim's and Jennifer's classes mentioned having problems understanding their teachers:

Student: I think sometimes maybe the directions need to be a little better. I think this is listening problem. (Jim, student interview, November 2010).

However, some of the students seem to blame the problem more on their own listening skills, than on the teacher:

Student: Actually, my listening is not good, but this class is writing. Sometimes, the teacher shows something, use English, but maybe speak something fast. I can't catch some word, I can't understand fastly, fast like this. But sometimes can slow the speed to speak something - sometimes listening is my problem. (Jennifer, student interview, November 2010).

This problem is not surprising, given the range of levels students in this IEP program have in the different skill areas (listening, speaking, reading, and writing). However, considering the students' rating of item 19, *Understanding my teacher's directions in the classroom was [Somewhat Easy]* ($M = 4.15$, $SD = .99$) it appears that the problem may be limited to only a few students. Nonetheless, it may be something teachers need to be aware of when teaching in a blended learning environment. Likewise, this issue could potentially have had

some influence on the student ratings of item 51, *The teacher is prepared and available to answer my questions* ($M = 4.41$, $SD = .71$). However, considering that this item was, in fact, the highest rated within Scale 5, Facilitation, this is difficult to determine.

LMS utilization and online activities

The issue of LMS utilization and online activities centers on comments made by Harry, though Sandra's students also mentioned it. To illustrate the issue, we begin with a comment that one of Sandra's (Spring) students made about her teaching. He said, "Sandra make some different ways to teach us, like not also in the lab but also in the library" (Sandra (Spring), student interview, April 2011). Here, her student clearly recognized, and seemed to appreciate, that she taught them in different ways, in different places. The researcher classroom observations also back this up. Sandra was a very easy-going person who was not strict with her students. She would almost always be smiling and happy and was never observed being stern with her students. It was clear to the researcher that Sandra was an experienced teacher. This was, for example, evident in her relaxed responses to unforeseen problems in the classroom, which never seemed to upset her or cause her to show stress. She also seemed comfortable trying out new things and experimenting with new activities. However, while Sandra's students liked her approach and the activities they did Harry's students were not as positive. Primarily, Harry's students complained that they did a lot of peer feedback online:

Student 1: I think our comment (in the online forum) is not for our friend but for the machine.

(students laugh)

Student 2: When we finished essay Harry give us back with comments but we can't work on that because we already finished.

Researcher: Do you think that Harry actually checked that you gave comments to your classmates?

Student 1: Yes, it is the only reason that we keep posting our comments, because our teachers control that. It is only, but for the discussion between our friends, it is not real, mutual. We just post and nobody cares, I guess. (Harry (Spring), student interview, April 2011).

This was partially confirmed by a conversation the researcher had with Harry after having observed one of his classes towards the end of the Spring 2011 semester. During the conversation, Harry described how he mainly used the content management system for students to do peer reviews. He also expressed that he felt students did not need to be in a lab to do that. He would prefer to assign that kind of work as homework. When the researcher asked if he had tried different kinds of online activities where students, for example, had to study a topic online and subsequently write an essay based on it or demonstrate their knowledge in some other way, he said he had not tried this. These statements are also backed up by a comment he made during his interview, at the end of the Spring 2011 semester:

Harry: I volunteered. I wanted to do it. And I am glad I did. I learned, and I think next time I will be able to use it better for my students. But it was this

semester I had to learn how to use this system and it was... I didn't do as good a job of teaching my students how to use it, because I didn't know myself, at the beginning. (Harry (Spring) teacher interview, May 2011).

The researcher got the impression that Harry's students really liked his very animated, joking, and friendly attitude in the regular classroom. They seemed to appreciate that he took a personal interest in all of his students and that he usually had time to answer course-related questions or just chat with them after class. However, considering that Harry did not want to plan with the other teachers, his online activities appear not to have been as creative or varied as those of the other teachers.

Taken together, these comments may help explain why items 53. *The teacher encourages me to learn in different ways* ($M = 3.88$, $SD = .95$) and 57. *The teacher respects my individual way of learning* ($M = 4.02$, $SD = 1.01$) were the two lowest rated items in Scale 5. In fact Harry's rating on item 53 was one of his lowest ($M = 4.09$, $SD = 1.22$). Sandra (Spring), on the other hand, received the highest rating of all teachers on item 53 ($M = 4.20$, $SD = 0.84$). Consequently, it appears that students notice if activities are not varied enough in a blended learning environment. That said, it is important not to read too much into this. While most of the teachers received some of their lowest scores on item 53 most also did varied activities online that they planned collaboratively during the Fall semester. Thus, it is necessary to acknowledge that students may very well interpret this and other items somewhat differently as they are answering them. With this in mind we turn to the final category of teacher feedback.

Teacher feedback

On the subject of teacher feedback Sandra's and Harry's students commented on the amount and frequency of feedback they received on their written essays. For Sandra (Spring) the comments were positive. The first comment is part of the previously used quote regarding Sandra's activity planning and communication. However, it illustrates how she provides more frequent scores and feedback for the students on their writing:

Student: Our work is divided in sections and we receive a score for any section, and sometime we receive some feedback about our performance.

And in class we review all our work - for example I review the introduction of my classmate and shared some comment with him. (Sandra (Spring), student interview, April 2011).

The second comment came at the end of the interview when the researcher asked the students if there was anything else that they felt it was important he knew about the class:

Student 1: For that, for me, the feedback from the professor is very important. But, at the beginning, we didn't have feedback. I talk with the teacher and she changed this part of the course and give me more feedback.

Not only for me, for all the students. But is necessary that the feedback to be a continuous process because if I don't know my mistake I cannot learn. In many class we do many homework but never receive our feedback about our..., only, sometime, our score, but not the right answer.

Researcher: (To other students) Have you noticed any of this? Do you feel the

same way?

Student 2: Yeah.

Student 3: Yes.

Student 4: Yeah.

Researcher: You could also use a little more feedback from the teacher sometimes?

Student 1: Yeah.

(Sandra (Spring), student interview, April 2011).

Harry, on the other hand, received less positive comments from his students regarding the amount of feedback he gave them. Not only did they feel that he gave them too much peer review work, they also wished he would comment more on their essays and give them his comments sooner in the review process:

Student 1: The thing that we proceed still [with] our comments in the forum [is] because our teacher is concerned about it. [I] means, he knows that we post our comment and that's it.

(some other students nodding)

Researcher: Did you consider when other people gave you comments?

Student 1: Yeah I take advantage. But still, the final executions is at Harry.

Our friends give comments and Harry give comments, so our friends' commitment is the second commitment - there is no priority any more.

Student 2: And we only get one comment at the end, from the teacher, so

when we, the process [...] is long because you get comments from your classmates saying that this is a good essay. You continue working on the essay on the same process and the same organization, but when you give them the final essay you get surprised that your essay is not that good. (Harry (Spring), student interview, April 2011).

This was elaborated on by another student who said:

Student 1: Like it is not our job to evaluate others essay, it's the teacher's job. Like we had to answer nine questions and those questions were like comments on our friends' [essays], and honestly, I didn't finish. I never commented on a student because nine questions is too much in very little time. (Harry (Spring), student interview, April 2011).

It is not clear whether the students tried to ask Harry to give them their feedback sooner, but we must assume they did not, as they do not mention it.

As we compare the WEBLEI Scale 5, Facilitation, ratings to these comments it is likely that they can help explain the comparatively low rating of item 54, *The teacher gives me quick comments on my work ($M = 4.05$, $SD = .87$)*. In spite of their complaints, Harry's students him quite well on item 54 ($M = 4.09$, $SD = 1.22$). However, the students appear more divided in their opinions as evidenced by the fairly large standard deviation compared to, for example, Sandra's (Spring) rating ($M = 4.00$, $SD = .71$). In addition, Harry's rating on item 54 tied with item 53 ($M = 4.09$, $SD = 1.04$) for his lowest rating on Scale 5. If one is to speculate why Harry's ratings for item 54 are this high in spite of his students' complaints it

is likely due to the fact that the feedback he gave students in the classroom, on their final essays, was quite comprehensive. For about a week, he discussed two student essays per class, giving detailed feedback and eliciting comments from the class.

Summary

In summary, Scale 5, Facilitation, received the highest rating of any of the five scales. There were no statistically significant differences between the individual teacher ratings and teachers did not have a statistically significant influence on how students rated their experience of studying writing in a BL environment. However, the individual teacher ratings were still different enough to warrant discussion based on the teacher and student interview comments and the researcher classroom observations, which held more specific and detailed information about the performance and behavior of the individual teachers. The students generally considered the teachers well prepared and attentive to student needs while being focused on their work in the classroom. They also indicated that the teachers challenged the students to perform at their best. The data showed that teacher organization and communication are important aspects of teacher practice and behavior in a blended learning environment. In particular, students appreciate when teachers give them clear directions. However, some students also acknowledge that their own listening skills sometimes make it difficult to understand their teacher's spoken directions. In terms of teachers encouraging students to learn in different ways and respecting their individual ways of learning the ratings were somewhat lower, though still quite acceptable. The main student complaints on these topics centered on teacher feedback on student writings and

the kinds of activities carried out in the online LMS. Students prefer more variety in the online and classroom activities they are assigned and would like to have frequent teacher feedback on their writings. In addition, peer feedback needs to be kept at a reasonable level for students to take it seriously and not grow tired of it.

RQ 4: To what degree does teacher practice and behavior affect students' perceptions of the course?

This question seeks to determine to what extent the practice and behavior of teachers in an intensive English program is a factor in students' opinions of learning writing in a blended learning environment. In other words, do the individual teachers have any influence on the student ratings of the individual WEBLEI scales? In order to answer this question, the means of the student ratings for each scale were calculated and a One-way ANOVA was conducted with the scale means as the dependent factors and teacher as the independent factor. The results, listed in Table 21, make it clear that there was no significant effect for the teacher variable on the student ratings of the WEBLEI scales.

Table 21. Teacher effect on student opinions of learning writing in a blended learning environment

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>
Access	41	3.57	0.56	5, 35	1.22	.320
Interaction	41	3.63	0.55	5, 35	1.21	.326
Response	41	3.45	0.55	5, 35	1.14	.357
Results	41	3.75	0.68	5, 35	0.75	.593

In spite of these findings the students in the different classes did have different opinions about the course. Table 22 lists the student ratings of Scales 1 through 4 of the WEBLEI from the individual classes, which are identified by the name of the teacher.

However, none of these differences between the student ratings were statistically significant. This is likely due to the small number of students in each class.

Table 22. Student ratings of individual teachers for Scales 1 – 4

Teachers	Scale 1 Access			Scale 2 Interaction			Scale 3 Response			Scale 4 Results		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Ann	6	3.38	0.48	6	3.25	0.34	6	3.23	0.36	6	3.42	0.43
Jim	6	3.19	0.53	6	3.63	0.37	6	3.29	0.70	6	3.98	0.56
Jennifer	7	3.53	0.51	7	3.50	0.60	7	3.20	0.24	7	3.79	0.55
Sandra (Fall)	6	3.88	0.41	6	3.96	0.36	6	3.67	0.32	6	4.00	0.67
Harry (Spring)	11	3.69	0.75	11	3.74	0.70	11	3.64	0.77	11	3.58	0.98
Sandra (Spring)	5	3.69	0.23	5	3.68	0.58	5	3.63	0.40	5	3.90	0.45

In order to confirm these results a One-Way Between-Subjects Random-Effects Analysis of Variance was conducted on the data. The use of this procedure is warranted due to the fact that the student participants were selected randomly. The purpose was to estimate whether classroom teachers accounted for a meaningful amount of variance in post-questionnaire scores (i.e. student ratings of the BL environment). The ANOVA results were not significant $F(5, 35) = .887$ (see Table 23). Therefore, individual teachers do not appear to affect students' scores on the post-questionnaire.

In an attempt to explain the differences in WEBLEI ratings between the different teachers different variables were investigated. This investigation revealed that teacher experience may be a factor in how students rated their teachers on the individual scales of the WEBLEI. More specifically, Jennifer and Ann typically have the lowest scores on the individual WEBLEI scales, though there are a few exceptions, such as Scale 1. Moreover,

Jennifer, Ann and Jim typically have lower scores than Harry and Sandra, except for Scale 4, where Harry's score is one of the lowest.

Table 23. Test of between-subjects effects

Source	df	F	Sig.	Partial Eta Squared
Teacher	5, 35	.887	.500	.112

a. .956 MS(teacher) + .044 MS(Error)
b. MS(Error)

The descriptive data presented in Table 24 suggest that this may be the case. However, the number of teachers in the current study is too small to conduct a reliable regression analysis on the relationship between these factors.

Table 24. Teacher experience and WEBLEI ratings

	Teacher Experience in Years	Scale 1	Scale 2	Scale 3	Scale 4	Scale 5	Mean WEBLEI Rating
Jennifer	3.0	3.53	3.50	3.20	3.79	4.04	3.61
Ann	4.0	3.38	3.25	3.23	3.42	3.79	3.41
Jim	6.0	3.19	3.63	3.29	3.98	3.93	3.60
Sandra (Fall)	10.0	3.88	3.96	3.67	4.00	4.40	3.98
Harry (Spring)	10.0	3.69	3.74	3.64	3.58	4.30	3.79
Sandra (Spring)	10.5	3.69	3.68	3.63	3.90	4.40	3.86

Note: Teachers listed in order of least to most experienced

Together, these results demonstrate that the individual teachers in and of themselves did not contribute significantly to the differences in students ratings of the WEBLEI scales across the different classes. However, it is interesting to note that teacher

experience may be correlated with student WEBLEI ratings, though the available data does not allow us to conclude one way or the other with regard to this relationship.

The researcher's observations of the Fall teacher participants' lab classes support the results reported in Tables 21 and 23. The researcher observed two cases in which Ann and Sandra sent their students to join Jennifer's students on a lab day. In these two cases it was remarkable how easy it was for the other students to join Jennifer's class. Jennifer simply told them to sit at a computer and log in to their own teacher's Moodle course and follow the directions posted by their teacher. They could then ask Jennifer for help, if needed, but very few did. The teachers later commented to the researcher how convenient and easy it was to do this and how it made substitutions easier. The main reason for this, as indicated by the teachers, was that since the students were used to working independently they did not need much teacher assistance in order to do their online activities. Therefore, if teachers normally did not interact much with their students on lab days, it stands to reason that teacher practice and behavior did not create a very strong differential impression on the students during lab classes. Furthermore, since the teachers planned their classes collaboratively they also tended to exhibit very similar behavior during lab classes. Of course, this does not account for any potential differences in teacher personality or how they behaved during regular classroom sessions. Consequently, these individual differences may account for the relative differences in teacher ratings reported under research question 4. However, these differences were not significant.

It is clear from the available data that the students had different opinions of their teachers. However, other than on Scale 5, Facilitation, they were not asked to rate their teachers during the interviews. Thus, the only data regarding different teacher performances that could have been collected was if the students commented on their teachers specifically during the interviews. These comments have already been covered under the results for research question 1.

The next chapter discusses the findings presented in this chapter and presents the study limitations. In addition, the practical implications for teaching ESL in a BL environment are discussed as are the theoretical implications for researching BL ESL environments. Lastly, concluding remarks round off the chapter.

CHAPTER 5: DISCUSSION

Introduction

In this chapter a discussion of the results for this study will be presented that investigated how to prepare ESL teachers to create a productive blended learning environment for students in an intensive English program writing course. The discussion will be divided into ten sections: 1) a brief summary of the study, 2) an examination of the impact a training program has on teachers as they design BL environments and teach using a BL approach, 3) an examination of how students describe the productiveness of the blended learning environment in an IEP writing course, 4) an examination of how students perceive their teacher's practice and behavior in a BL environment, 5) an exploration of the degree to which teacher practice and behavior affects students' perceptions of the BL IEP writing course, 6) a summary of the conclusions, 7) an outline of the limitations of this study, 8) an exploration of the practical implications of this study, 9) an exploration of the theoretical implications of this study, and 10) concluding remarks.

Summary of the study

This study sought to accomplish several goals through its investigation of how to prepare ESL teachers to create a productive blended learning environment for students in an intensive English program writing course. The first goal was to discover whether a teacher training and support program based on the recommendations of Chickering and Gamson (1987), Kaleta, Skibba, and Joosten (2007), and Rochelle et al. (2000) could meet

the needs of teachers as they sought to create a blended learning environment for their students. The second goal of this study was to measure the students' perceptions of the blended learning environment with respect to its productiveness. The third and final goal was to discover how students experienced the teacher's practice and behavior and the extent to which these factors affected student perceptions of the course and blended learning environment in general.

Three bodies of research were tapped in the pursuit of these goals: 1) Research in the area of blended learning in higher education, 2) research on blended learning implementation in second language acquisition, and 3) research on blended learning teacher training and support. The study was designed to contribute to the existing body of knowledge in each of these areas. This study demonstrates how to apply Tobin's (1998) framework for the exploration of "computer environments and distance learning" (p. 144) to the investigation of an academic blended learning environment. Likewise, the use and modification of Chang and Fisher's (2003) Web-based Learning Environment Instrument (WEBLEI), which is based on Tobin's framework, not only demonstrates how it may be used in an ESL environment but also modifies it to include a Facilitation scale. Together, Tobin's framework and Chang and Fisher's WEBLEI can be used to examine and compare various kinds of blended learning environments and is not limited to ESL or intensive English program environments. Research on blended learning implementation in second language acquisition is addressed through the focus on a blended learning environment within an IEP writing course. Thus, issues such as student attitude and experience and various teacher

factors, including teacher buy-in and acceptance, are all examined and discussed. This, in turn, provides valuable information on how blended learning may be implemented in IEP writing courses in particular and in ESL and EFL courses in general. Finally, this study adds to the existing body of knowledge on blended learning teacher training and support through its focus on teacher pedagogical and technical training and support. Thus, the findings of previous research are supported while additional details are added.

In order to investigate the use of a BL environment in an SLA course 41 students and five teachers of six different IEP writing courses were enrolled as participants. The teachers were trained in BL pedagogy and given pedagogical and technical support throughout the semester, after which both students and teachers were given questionnaires and were interviewed in order to determine their experiences in the BL environment. During the semester, the researcher also met regularly with the teachers to aid them in their use of BL and observed their classes to record their behavior and practice in regular classroom and lab classes. During these observations student behavior and attitude were also recorded. The collected data were subsequently computed and transcribed. Quantitative data from the teacher and student questionnaires were analyzed using various descriptive statistical procedures and inferential procedures such as t-tests and ANOVAs. The qualitative data, which were in the form of teacher and student interviews, were transcribed and analyzed to uncover different salient categories and topics. These were then cross-referenced and triangulated with the quantitative data in order to provide a multi-faceted picture of the teacher and student experiences in the BL environment. Results for this study were

reported in Chapter 4. These results, and the specific inferences that may be made based on them in relation to the teaching of IEP writing courses in a blended learning environment, will now be discussed.

Training and Supporting Teachers in a BL Environment

Based on the results presented in Chapter 4 it is now possible to determine what impact the training and support program had on the teachers' experience of designing and teaching in a BL environment. To address this question, teachers were given a 17-item questionnaire to answer and were interviewed individually at the end of the semester(s) in which they participated. Added to this are the data from the teacher interviews which are divided into four salient categories that were discovered in the data. Together, the questionnaire and the interviews provide a detailed picture of the teachers' experiences, which will now be discussed based on the interview categories.

Pedagogical training and planning

On this topic, the teachers reported that they found the blended learning training beneficial because it provided them with pedagogical reasons for using BL and helped motivate them to use it. In addition, they found that they received the pedagogical support they needed, as evidenced by, for example, item 1, *After getting the BL training I felt pedagogically prepared to teach this course ($M = 4.50, SD = .55$)*, and item 2, *I received the BL pedagogical support I needed during the course ($M = 5.00, SD = .00$)*. Considering that the literature on CALL teacher training calls for better pedagogical and technical training of CALL

teachers (Chapelle & Hegelheimer, 2004; Davis & Rose, 2007; Jones & Youngs, 2006; Kaleta, Skibba & Joosten, 2007; Oxford & Jung, 2007; Slaouti & Motteram, 2006) this study addressed this reported gap and prepared the teachers pedagogically. Interestingly, the needed amount of pedagogical training was fairly minimal, given that it was accomplished in about two hours at the beginning of each semester. During the subsequent weekly planning meetings the researcher only had to do minimal reinforcement of this training. In terms of technical training, two 45-minute workshops on Moodle tools were conducted in the Fall 2010 semester and one during the Spring 2011 semester. In the Fall 2010 semester the teachers' collaboration and mutual support helped sustain the training. However, during the Spring 2011 semester Harry's dislike of collaborative planning may be the reason why his use of the online environment was not as diverse and flexible as that of the other teachers. This will be discussed shortly in the Collaboration section.

The teachers did experience pedagogical challenges during their planning. One challenge, expressed by one of the Spring 2011 semester teachers, centered on the need to start planning the BL class before the beginning of the semester. This topic was prompted by the fact that the IEP program in which the data were collected does not normally assign teachers to the different skills and levels until the day before classes start. The fact that teachers would like to plan ahead of time is not surprising. While the need for advance planning may be somewhat mitigated by teacher experience, teachers who need to learn to use a new form of pedagogy need time to prepare. Kaleta, Skibba, and Joosten (2007) suggest to start technical and pedagogical teacher training at least half a year in advance, to

allow teachers time to learn and plan their courses ahead of time. However, Reinders (2009) also acknowledges the challenges involved in training and preparing in-service teachers. Particularly, issues of time and money often require teachers to volunteer their time for professional development. This was also the case in this study, where the teachers were not given monetary compensation for participating. However, the positive results that were achieved in the current study in terms of the teachers' ability to teach effectively in a blended learning environment also suggest that a lengthy training period may not be necessary. In fact the teachers only needed a few hours of instruction at the beginning of the semester in order to create an effective blended learning environment.

Notwithstanding the positive results of the teacher training, the presence or absence of a community of practice among the teachers was also a significant factor. Hubbard (2008) suggests that teachers are encouraged to form a community of practice to support their learning and such an environment was encouraged by the researcher. It worked very well during the Fall 2010 semester but could not be sustained during the Spring 2011 semester. This topic will be discussed in greater detail later in the Collaboration section. Thus, the findings of this study confirm that teachers need time for advance training and planning. However, the study results also indicate that given proper training and support, this need may be somewhat reduced or mitigated.

Another challenge expressed by two of the teacher participants involves the integration of lab days and regular classroom days. The teachers found it challenging, but managed to learn how to transition between them and integrate online and face-to-face

(FTF) activities during the course of the semester. This is supported by the teachers' ratings of item 4, *There was a good balance between online and classroom activities* ($M = 4.83$, $SD = .41$), item 5, *The online and classroom activities integrated well* ($M = 4.83$, $SD = .41$), and item 6, *I made an effort to integrate classroom and lab activities with each other* ($M = 4.67$, $SD = .52$). These results suggest that the training, which stressed Kaleta, Skibba and Joosten's (2007) advice to "integrate face to face and online activities to avoid teaching two parallel and unconnected courses" (p. 138), helped the teachers avoid the problem of treating the online parts as merely an add-on to the FTF class (Hoffman, 2006).

Technical preparation, support, and integration

The teacher participants generally had very favorable views of the technical support they experienced during the study. Two of the teachers reported not being familiar with the Moodle CMS at the outset of their participation. However, they were both able and motivated to invest the necessary time in learning how to use the CMS. All of the participating teachers reported being happy with the available technical support, which, besides the researcher, included online Moodle tutorials and the departmental Moodle support person. This is backed up by the teachers' answers to item 7, *I felt technically prepared to teach this course* ($M = 4.17$, $SD = 1.17$), item 8, *I received the technical support I needed during this course* ($M = 4.83$, $SD = .41$), and item 14, *Getting technical support was [easy]* ($M = 4.83$, $SD = .41$). These results indicate that having technology support resources available for teachers involved in blended learning is valuable. As such, these results also support the findings of Dziuban et al. (2006) who consider the support from technical

specialists critical to the success of BL. Other researchers such as Davis and Fill (2007), Young (2008), and Hoffman (2006) also stress the importance of the availability of technical and pedagogical support for teachers. Interestingly, several teachers in the current study reported that it was difficult to find the necessary time to consult these technical support resources. Thus, this links back to the problematic issue of finding time for in-service teacher training.

On the topic of technology integration the teachers also appreciated the fact that the researcher let them explore Moodle at their own pace without trying to pressure them to try new features before they felt ready to do so. In fact, the teachers were free to request training on only the tools they thought would be helpful to them. During the Fall 2010 semester, the teachers requested training on the Moodle Gradebook and Quiz tools and during Spring 2011 semester only on the Moodle Gradebook. While it clearly required some time and effort to learn to use these tools, the teachers only had positive comments about them. This ability to self-select which tools to use and when to use them likely contributed to lowering the teachers' stress and anxiety about technology integration. Consequently, these results suggest that it may be beneficial to let teachers control the pace and focus of their adoption of technological tools.

Another challenge of technology integration involves the availability of multimedia equipment in regular classrooms. During the course of the study most of the teachers used the projectors in their regular classrooms to integrate the online lab activities. However, Sandra did not have a projector in her regular classroom and felt that it limited her ability to

integrate online and classroom activities. Considering that several researchers, such as Hoffman (2006) and Kaleta, Skibba, and Joosten (2007), stress the need to integrate the two modes (online and FTF), these results point to the importance of administrative support. More specifically, teachers who use BL need to be given access to the necessary technology in order to teach most effectively. The importance of administrative support has also been voiced by several researchers such as Lafford (2009) and Young (2008).

Collaboration

The issue of collaboration came up during both semesters. During Fall 2010, the teachers indicated they had a very positive collaborative experience. They reported that it made planning and preparation easier, faster, and more interesting and creative while increasing their confidence. Furthermore, the students also benefitted from the teacher collaboration, as evidenced by Jim's example of how it allowed him to better focus on student learning. Other teacher comments mentioned the fact that having each other to bounce ideas off of was positive in terms of the quality of different online and FTF activities. Moreover, working together seems to also have made the teachers feel more comfortable in a new and challenging situation. These findings support Hubbard's (2008) suggestion to have teachers form a community of practice to support their learning about CALL. However, not all teachers liked to collaborate.

During the study's second semester (Spring 2011) very limited collaboration took place among the teachers. This was due to Harry's dislike of collaboration and preference for planning his course alone. He clearly felt better with a greater degree of control over his

course and the ability to plan farther ahead than he believed was possible in a collaborative setting. This lack of collaboration may have been the reason why Harry's use of the online environment was not as diverse and complete as that of the other teachers. This was evidenced by student comments and researcher observations. For example, he mostly used the online Moodle environment to facilitate student peer-feedback on their writing. In addition, he made limited use of online study materials for the core course content. The limited collaboration seems to have had minimal effect on Sandra's teaching. This was likely due to the fact that she already had experience with how to teach in a BL environment from her participation in the study during the Fall 2010 semester. Consequently, the results of the present study suggest that teachers should be encouraged to collaborate, as suggested by Hubbard (2008). However, some teachers may not feel comfortable with this. These teachers would likely benefit from regular meetings with a support person who could provide continuous guidance and reinforcement of the BL pedagogical and technical training.

Teaching impact

The teacher participants experienced that teaching in a BL environment affected classroom dynamics, efficiency and their workload. For classroom dynamics, which covers student and teacher interaction and student and teacher attitude to the course activities and each other, the teachers found that students worked more autonomously and focused in the computer labs and that the use of BL made students more responsible for their own learning. These findings support similar results from researchers such as López-Pérez, Pérez-

López, and Rodríguez-Ariza (2011), Osguthorpe and Graham (2003), Singh (2010), Pennock-Speck (2009), and Sanprasert (2010). An increase in student autonomy, responsibility and focus is a very positive outcome and some of the main reasons why educators seek to use blended learning (Davis & Fill, 2007; Fulkerth, 2010; Moore & Gilmartin, 2010; Oh & Park, 2009; Vaughan, 2010). The teachers believed that the student training that was carried out at the beginning of each semester was one of the reasons for these positive findings. One teacher also noticed that when he, himself, demonstrated online participation during the training, it had a positive effect on student participation. This finding is not surprising and is supported by Wiebe and Kabata (2010), who found that teachers have an effect on student attitude in a BL environment. They also found that it had a positive effect on student use of the online environment when their teachers encouraged them to use it.

The teachers in the study also had a very positive attitude towards the improved classroom dynamics. The teachers found it easier to provide more personalized, individual assistance to students and to keep track of their progress. However, some also believed that it was a challenge to let the students take more responsibility for their own learning, because they were not always on task. These findings are closely related to those regarding the efficiency of the BL environment. More specifically, the teachers found that blended learning was more efficient in terms of student learning and in terms of enabling the teachers to monitor student progress. In addition, the teachers found that the added efficiency helped make their planning and teaching easier, which in turn resulted in the ability to cover more material during the course of the semester.

These findings related to student assistance and teacher monitoring of student progress are very positive and while the literature in the area has found a connection between the use of BL and improved learning outcomes (Amaral & Shank, 2010; Boyle, Bradley, Chalk, Jones, & Pickard, 2003; Collopy & Arnold, 2009; Dziuban, Hartman & Moskal, 2004; Lei, 2010; López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; O'Toole & Absalom, 2003; Vaughan, 2010), very little has focused on the teachers' perception of teaching in a BL environment. To wit, student exam pass rates, grades, and understanding have all been found to improve in a BL environment (see, for example, Amaral & Shank, 2010; Boyle, Bradley, Chalk, Jones, & Pickard, 2003; Collopy & Arnold, 2009; Dziuban, Hartman & Moskal, 2004; Lei, 2010; López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; O'Toole & Absalom, 2003; Vaughan, 2010). However, the research on teacher attitudes about teaching in a BL environment is very sparse. In fact, of the three studies that touch upon the subject, only Wiebe and Kabata (2010) specifically examined how educational technologies affect the attitudes of teachers and students. They found that the instructors in their study generally had a positive attitude towards the role of CALL materials and positive perceptions about the usefulness of instructional technology just like they felt that using instructional technology increased their instructional effectiveness. Consequently, it is difficult to determine if other teachers have had similar experiences, though it stands to reason to assume that they might have. However, it is worth noting that the teachers in the current study found this time to provide more personalized, individual assistance to their students during lab classes in which the students worked individually on online tasks. Thus, this may

be an important matter in terms of teacher training, insofar as teachers should be made aware of these possibilities when teaching in a BL environment and be encouraged to take advantage of them.

The last topic under the category of Teaching Impact concerns the teachers' perceptions of their workload. This topic prompted a significant amount of comments in which the teachers all agreed that while BL gave them more work in the beginning with planning and learning the technology, they also later felt more relaxed. They reported that their planning became easier, they had less work, and they expected that teaching the same course again would be significantly easier. These interview comments were supported by their answers to item 9, *Using BL did not make this course more demanding to teach* ($M = 4.50, SD = .55$) and item 10, *I would like to teach other ESL courses using BL* ($M = 5.00, SD = .00$) on the questionnaire. As evidenced by the review of the literature in Chapter 2, the available research on teacher perceptions of teaching in a BL environment is very sparse. Nonetheless, it is clearly important that teachers feel confident and comfortable when teaching in a BL environment. Teachers, trainers and support personnel share the responsibility for fostering this confidence and comfort. However, the BL pedagogy and technology trainer(s) and the technical support personnel play a critical role. Without them, the great majority of teachers are likely to find the process of learning how to teach in a BL environment both frustrating and difficult. Considering how satisfied the teachers in the current study were with the training and support, it is likely that this training, including the encouragement to plan collaboratively during the semester, played a big role in fostering

this feeling of confidence and comfort. Consequently, these results suggest that teacher training is very important in terms of giving the teachers a feeling of confidence and comfort when teaching in a BL environment.

Student Perceptions of the Blended Learning Environment

The second goal of this study was to examine the students' perceptions of the blended learning environment with respect to its productiveness. To address this issue, the students were asked to answer a 57-item questionnaire which contained the 38 items belonging to the modified WEBLEI questionnaire and an additional 19 questions that also addressed this topic. In addition, a group of 4-5 students from each class was interviewed at the conclusion of each semester in order to gather additional data and address issues not covered in the WEBLEI questionnaire. Together, these data provide a detailed picture of the students' perceptions of the productiveness of the BL environment. The questionnaire results will be discussed first, centered around the WEBLEI scales. The issues discovered in the interview data are discussed together with the relevant WEBLEI scales.

The results from Scale 1, Access, on the modified WEBLEI questionnaire suggest that students generally had a positive view of their ability to access the on-campus classes and the online materials ($M = 3.57$, $SD = .56$). Student ratings of individual items indicate that the learning activities were often available to students at times and locations that were suitable and convenient for them, and that they could often work at their own speed. The questionnaire data also indicate that a total of 78.1% of the students either *Somewhat Agreed* or *Strongly Agreed* that the online activities helped them learn while 75.6%

Somewhat Agreed or Strongly Agreed that the classroom activities helped them learn. These are positive findings that indicate that conducting an IEP writing class in this kind of blended learning environment can provide the students with good access to in-class and online learning materials.

The mean student rating of 3.57 ($SD = .56$) for the Access scale is slightly lower than the mean ratings obtained by Chang and Fisher (2003) and Chandra and Fisher (2009) that were 3.96 ($SD = .53$) and 3.94 ($SD = .66$) respectively. One could theorize that certain individual items might be the cause of the lower rating in the current study. For example, the mean values for items 23 through 26 were slightly lower than those for the other items in this scale. These items center on the students' experience of their ability to decide such things as what to study, when to study, and what goals to work towards. While these items do decrease the scale mean it is not possible to say whether the students in the studies conducted by Chang and Fisher (2003) and Chandra and Fisher (2009) felt the same way, since the authors do not provide the scores for the individual items.

These findings are not surprising given that the IEP program and, to some extent, the course teachers, determined the course curriculum. Therefore, it is possible that the students did not always understand how the course and IEP program activities could help them reach their goals of passing their language proficiency tests and start university studies. This latter issue is common in the program. The researcher has conducted research and workshops within the IEP program several times during the last three years and has interacted socially with many of the teachers over the past six years. Several times, he has

heard teachers describe how many students join the IEP program with the expectation that they will only have to spend one semester there and that the courses will focus on test preparation. However, the program only does so indirectly by focusing on raising the students' level of English to the level they will need in order to be successful university students. Thus, this issue may have less to do with the use of blended learning and more to do with the general student expectations of the IEP program.

The fact that technology can facilitate student access to different kinds of learning materials was also part of the findings of Cartner (2009), Sagarra and Zapata (2008), and Sanprasert (2010). For example, Sagarra and Zapata (2008) found that students in a blended learning college-level Spanish course had easy access to an online content management system and workbook and that using this system was simple. These findings, together with those of Chang and Fisher (2003) and Chandra and Fisher (2009), signal that high school- and college-age students generally find it easy and convenient to access online learning materials that are part of a blended learning environment. Consequently, using blended learning with IEP writing students can provide a learning environment with good student access to their in-class and online learning materials.

That being said, it is necessary to also keep in mind that teaching with technology can cause some students to experience technical problems or barriers to participating. In the current study, some of the students remarked during their interviews that the computers they were using in their lab were not stable and one student had experienced a problem with his personal laptop while trying to access the learning management system

from home. While these issues were minor, Coryell and Chlup (2007), who investigated the integration of e-learning components in adult English language classrooms, found that issues like these must be expected and teachers need to be prepared to deal with them. Likewise, Hofmann (2006) suggests having dedicated personnel available to deal with technical support issues for teachers and learners. In the current study, technology support for university computers was provided by university personnel and the researcher was available to help the teachers with any issue that they or their students had. Consequently, the technical issues experienced by the students in the current study confirm the need for technical support for teachers and students who use blended learning environments. The availability of this help ensured that these issues had minimal impact on the students' access to the blended learning materials.

Turning to the results for Scale 2, Interaction, on the modified WEBLEI questionnaire we see that students often experienced productive participation, collaboration, and cooperation in the blended learning environment ($M = 3.63$, $SD = .55$). Scale 2 covers learner interaction with one another for the purpose of achieving the stated learning outcomes. These are also positive findings that indicate that conducting an IEP writing class in this kind of blended learning environment can be beneficial for student peer-to-peer interaction, student-teacher interaction, and other issues such as learner independence and self-discipline.

The mean student rating of 3.63 ($SD = .55$) for the Interaction scale is slightly higher than the mean ratings obtained by Chang and Fisher (2003) and Chandra and Fisher (2009)

which were 3.55 ($SD = .55$) and 3.51 ($SD = .77$) respectively. Items 29, 30, and 34 all had higher-than-average mean values and thus contributed positively to the scale mean rating. These items focus on the students' ability to interact with their teacher and each other and how well they supported each other. While these findings do not necessarily prove that the blended learning IEP writing courses had improved classroom dynamics they are important preconditions for greater student engagement, participation, involvement, and preparedness which are all positive attributes of blended learning courses found by researchers (Amaral & Shank, 2010; López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; Osguthorpe & Graham, 2003; Shroff & Vogel, 2010; Singh, 2010).

One item that contributes negatively to the Interaction scale mean is item 27 / *communicate with other students in this subject electronically (email, discussion forums)* ($M = 2.93, SD = 1.17$). This lower rating does not signify that the courses were flawed or had communication problems. On the contrary, students and teachers simply met every weekday during class which meant there was little to no need to communicate electronically. This issue was also observed by Chandra and Fisher (2009) who found that the high school students in their study preferred to communicate with their teachers face-to-face and thus rated questionnaire items on electronic communication lower. In addition, while most of the teachers in the current study used Moodle discussion fora in their teaching, they were primarily used for students to post writings that the teachers needed to review or for students to give each other peer feedback. Consequently, the students may not have perceived this as online communication. Interview comments from Harry's

students, who complained about having to provide excessive amounts of peer feedback, support this. Their description of these activities indicated that they saw them more as demanding learning activities than actual communication. This item was included in the questionnaire because the WEBLEI was originally designed for university students learning in off-campus environments where electronic communication is considered much more important. Nonetheless, considering that the topic of the IEP classes in the current study was writing, the students could likely have benefited from doing activities that required genuine electronic communication.

Turning to the issue of learner self-discipline, item 28 *In this Blended Learning environment, I have to be self-disciplined in order to learn (M = 3.56, SD = .71)* is lower than one might expect. During the student interview, three different students commented on the fact that they were sometimes distracted by websites not related to the class topic. In addition, both Jennifer and Ann commented on problems with students getting distracted in the computer lab, which researcher classroom observations could confirm. Ann also commented that some of her students showed a lack of maturity and focus when they neglected to take enough responsibility for their own learning. Thus there appears to be a mismatch between how much self-discipline is needed and how much students *perceive* is needed.

One possible explanation for the relatively low rating in item 28 might be that many students did not possess the necessary maturity to realize the extent to which college study in the United States requires the individual learner to be responsible for his or her own

learning. In addition, the course teachers may have provided so much guidance in the form of oral reminders, directions, and written step-by-step instructions in Moodle that the students did not perceive a very big need to be self-disciplined and responsible.

Unfortunately, without data on this topic from students in non-blended classes, it is not possible to compare the extent to which students in blended and non-blended environments felt the need to be self-disciplined.

It is, however, worth noting that not all students displayed a lack of self-discipline.

Ann commented that many students acted in a responsible way and demonstrated engagement during lab classes. In addition, Sandra commented that her Fall 2010 semester students seemed more independent, which she ascribed to the use of blended learning. These findings mirror those of Pennock-Speck (2009) and Sanprasert (2010) who found that the use of blended learning had positive effects on learner autonomy.

The third scale, Response, on the modified WEBLEI questionnaire measured the students' sense of satisfaction, enjoyment, ability to collaborate, and sense of boredom while learning in the blended learning environment. While the mean rating of 3.45 ($SD = .55$) makes this the lowest-ranked sub-scale on the WEBLEI questionnaire it still signals that the students had positive experiences of their ability to learn within a blended learning environment. This rating is higher than the mean rating of 3.37 ($SD = .53$) achieved by Chang and Fisher (2003) and lower than that achieved by Chandra and Fisher (2009) which was 3.74 ($SD = .72$). In both studies, the authors considered their ratings satisfactory.

Three of the questionnaire items on this scale were somewhat lower than the scale mean. However, this is not necessarily for negative reasons. Thus, item 42 *I felt bored with this course when we got to the end of the semester* ($M = 3.05, SD = 1.07$) may have the lowest rating of the sub-scale, but this is positive because it signals that students only occasionally felt bored towards the end of the semester. In fact 53.7% of the students indicated that they *Sometimes* felt bored towards the end of the semester while 22% indicated they *Seldom* or *Almost Never* did. Thus, it is actually positive that this item rating is as low as it is. The other two items which had lower ratings were items 36 *I felt a sense of satisfaction and achievement about this Blended Learning environment* ($M = 3.41, SD = .84$), item 41 *The Blended Learning environment held my interest throughout the course* ($M = 3.34, SD = .97$).

These results signal that the students may be uncertain about their feelings of satisfaction, achievement and interest in the blended learning environment. However, the ratings are still quite good and it is worth noticing that 39% of the students *Often* felt a sense of satisfaction and achievement (item 36) and 43.9% *Sometimes* felt this. This suggests that the course was challenging for many students but that many of them also felt good about it. This interpretation is supported by the student responses to several of the questionnaire items that were not part of the WEBLEI. In items 1 through 8, the students indicated that they liked the online and classroom activities, that they liked learning in the classroom and the labs and, most importantly, that the course improved their writing skills.

Based on this, it is reasonable to conclude that the students had an overall positive experience with the blended learning environment.

Ensuring that students have a positive experience and develop a positive attitude towards the blended learning environment has been investigated and discussed by several researchers in the area of SLA (Cartner, 2009; Coryell & Chlup, 2007; Hong & Samimy, 2010; Miyazoe & Anderson, 2010; Sagarra & Zapata, 2008; Stracke, 2007; Wiebe & Kabata, 2010). These studies found that a critical component of the success of a blended learning environment is to ensure that students have a positive learning experience. Researchers in the area of higher education such as Dziuban, Hartman and Moskal (2004), Fulkerth (2010), López-Pérez, Pérez-López, and Rodríguez-Ariza (2011), and Vaughan (2010) also found that when blended learning is done well it can have a positive effect on student satisfaction and motivation.

Several comments related to student attitude and satisfaction were made by the students during their interviews. The positive aspects of the blended learning courses that students pointed out included the ability to practice studying with computers, gaining practice with typing, interacting with each other online in discussion fora. The negative comments that were made focused on the desire to have a more test-oriented course focus. The fact that several students may have wished for a change in focus may explain why some of the items in Scale 3 were rated lower. In other words, students who contributed to lowering the ratings for some items and scales may be reacting more to the inherent focus of the IEP writing course than the blended learning environment itself. In

addition, since the goal of many of the students in this particular IEP course is to finish the program as fast as possible, often times with apparent disregard to their own actual mastery of English, the feelings of satisfaction and achievement may have been negatively affected in those students who were starting to realize towards the end of the semester that they would not be able to leave the intensive English program as they had hoped. For example, around this time of the semester many students in the program have accumulated so many absences that the IEP policies prevent them from passing their courses. Some students also start to realize that their poor performance in their courses up until this point makes it difficult or impossible for them to get a passing grade for one or more courses. Consequently, other factors may affect the students' ratings of these items. Therefore, based on the results for Scale 3, Response, we can conclude that the blended learning environments created by the teachers in the current study had a positive effect on student satisfaction and motivation and that this finding supports the research findings in the areas of SLA and higher education in general.

The fourth scale on the WEBLEI is Results. This scale elicited student opinions about what they gained from learning in a BL environment. The overall mean for the Scale 4 was 3.75 ($SD = .68$). This rating compares well to that achieved by Chang and Fisher (2003), which was 3.72 ($SD = .57$), and that achieved by Chandra and Fisher (2009), which was 3.88 ($SD = .68$). This rating is also the highest of the four original WEBLEI scales, only superseded by the rating for the added Scale 5, Facilitation, ($M = 4.15$, $SD = .69$). Student ratings of the

individual items of this scale indicated that students generally found the purpose of the lessons clear and that they were easy to follow. Moreover, students understood the expectations of the assignments, felt that course content was well-planned and clear and that learning writing in a blended learning environment often worked well.

These findings are very positive and indicate that the course teachers did a good job of planning and executing their syllabi and were good at conveying their expectations and directions to their students. These findings are backed up by data from several other items outside of the WEBLEI scales. Thus, items 11 and 12 indicate that students found there was a good balance between online and classroom activities and that these activities worked well together. This, in turn speaks to the quality of the teachers and the training they received. Based on the advice of Kaleta, Skibba and Joosten (2007) the researcher made sure to stress the importance of linking the online computer lab and classroom face-to-face modes and giving the students clear directions during the teacher training sessions. In other words, the teachers were able to avoid treating the online parts as just an add-on to the face-to-face classes (Hofmann, 2006) or treating the two modes as separate, independent courses as Kaleta, Skibba and Joosten (2007) cautioned against.

In item 14 ($M = 3.95$, $SD = 1.00$) the students indicated they had a good understanding of why the course mixed online and classroom activities. This result speaks to the effectiveness of the student training carried out by the teachers. The need for training students in how to learn effectively in a blended learning environment was inspired by, among others, Coryell and Chlup (2007) who stress the need to consider learner

technical skill levels and learner understanding of how to learn with technology. This was supported by the ratings students gave to item 13 ($M = 3.85, SD = 1.11$), item 18 ($M = 3.90, SD = .92$) and item 17 ($M = 3.51, SD = .78$) which concerned the amount of technical support they received, how easy it was to obtain this support and how easy the instructions for the online activities were to understand, respectively. These findings suggest that the teacher and student training that was carried out in the current study were effective and adequate to prepare both students and teachers to teach and learn in a blended learning environment.

The student rating of item number 15 *I would like my other English courses to be taught like this course* ($M = 3.49, SD = 1.14$) are also worth noting. For this item, 29.3% of the students indicated that they *Neither Agreed or Disagreed* while 34.1% *Somewhat Agreed* and 19.5% *Strongly Agreed*. While this study did not attempt to make any direct comparisons between blended and non-blended IEP courses, both the students and the teachers obviously noticed the differences as indicated by, among other things, their interview comments, which are discussed elsewhere in this chapter. However, given the option to choose between blended and non-blended courses it appears that close to half of the students would prefer the blended learning course. In addition, close to 30% of the students would be equally happy in a blended learning course compared to a non-blended course.

This finding suggests, that from a student perspective, writing courses taught in a blended learning environment are a viable alternative to regular face-to-face classroom

courses. Considering the various positive findings and advantages mentioned by both teachers and students blended learning pedagogy may indeed be a valuable approach to teaching IEP writing.

Students' Perceptions of the Teacher Practice and Behavior

The third and final goal of this study was to discover how students experienced the teachers' practice and behavior and the extent to which these factors affected student perceptions of the course and blended learning environment in general. Part of the data used to answer this question comes from the student questionnaire, which includes the modified WEBLEI. In particular, Scale 5, Facilitation, on the WEBLEI was designed to elicit student opinions about the teachers' practice and behavior in the classroom. In addition, the student group interviews provided some interesting data on this topic. Besides this, statistical analysis was conducted to determine if teacher behavior was a factor in how students rated the other four WEBLEI scales. These data are listed under research questions 4 and 5 in the Results chapter.

The results from Scale 5, Facilitation, on the modified WEBLEI questionnaire suggest that the students in general had a very positive view of their teachers' practice and behavior in the BL environment. This is evidenced by the high mean rating of 4.15 ($SD = .69$), which was the highest of the five WEBLEI scales. This suggests that the teachers often behaved in a way that is consistent with good practice in the undergraduate classroom as outlined by Chickering and Gamson (1987). Going into greater detail with the findings, they indicate that the teachers were well prepared and attentive to student needs, focused on their work

in the classroom, and challenged the students to perform at their best. This is supported by student interview comments in which Sandra's and Jennifer's students lauded their teachers' level of preparedness and focus during classroom sessions and their ability to guide their students' learning. In addition, the student ratings of item 16, *My teacher seemed like he/she liked to teach this class* ($M = 4.07$, $SD = 1.01$) signal that the teachers generally displayed enthusiasm for the course. Considering that Chickering and Gamson (1987) have long ago established the importance of these factors in undergraduate education it comes as no surprise that the IEP students in the current study demonstrate that these factors are also important to them when learning in a BL environment.

While most scores on Scale 5, Facilitation, were very high some received slightly lower ratings. The student ratings of items 53, *The teacher encourages me to learn in different ways* ($M = 3.88$, $SD = .95$) and 57, *The teacher respects my individual way of learning* ($M = 4.02$, $SD = 1.01$) indicate that they were comparatively less happy with the teachers' performance in these areas, though these ratings are still quite high. Student comments during the interviews indicate that students appreciate learning in different ways, using different activities, in different places. For example, data from the researcher classroom observations and student interview comments point to the fact that Harry's online activities were not as creative and varied as those of the other teachers. This was likely due to two factors: First and foremost, Harry did not collaborate with the other teachers which prevented him from benefitting from the added creativity and variety that this afforded the teachers during the Fall 2010 semester. In addition, he admitted to not

taking time to consult with the researcher very frequently during the Spring 2011 semester. Based on his experience with the teachers in the first semester of the study, the researcher also conducted fewer in-class observations. In addition, the lack of planning meetings among the teachers provided less opportunity for monitoring the teachers' planning and providing feedback. However, the teachers were encouraged to ask for any help they needed and no requests for assistance were ever turned down. Instead, they were typically dealt with immediately.

These results confirm the importance of Chickering and Gamson's (1987) focus on having students learn in different ways. In addition, with respect to BL teacher training and support, these results indicate that teachers who do not have a community of practice for ongoing support may need more pedagogical support from professional support personnel. The personnel providing this support also need to have enough time to devote to monitoring and support in order to meet teacher needs. These findings reinforce the advice of researchers such as Davis and Fill (2007), Young (2008), and Hoffman (2006), to have dedicated support staff available to assist the teachers and act as agents of change.

Another item on Scale 5, Facilitation, which students rated comparatively lower, though the score was satisfactory, was item 54, *The teacher gives me quick comments on my work (M = 4.05, SD = .87)*. Considering that the current study was conducted in a writing class which often involves a lot of commenting and feedback by teachers on student essays and online postings, there was a greater potential for students to notice this aspect of their teacher's practice. While the students' ratings suggest that the teachers in general *Often*

gave them quick comments on their work, there were some interesting comments made about some of the teachers' approaches for giving feedback during the student interviews. More specifically, Harry's students commented during their interview that they felt he gave them too much peer review work, too few online comments on their writings, and that his comments were given at a time where it was too late for them to revise their writings. Sandra's students also mentioned wanting more feedback from her more frequently. However, they asked her for this, and she complied. There are no indications that Harry's students complained to him about these issues to give him a chance to change his practice. These results support Chickering and Gamson's (1987) focus on teacher and student interaction in their seven principles for good teacher practice in the undergraduate classroom. Furthermore, they signal that teachers need to plan their online activities in a way that allows them to maintain an appropriate amount of interactions with the students. Considering that none of the other teachers experienced problems in this area, it is possible that the researcher's inability to provide frequent pedagogical support during the Spring 2011 semester may be one of the causes. Kaleta, Skibba, and Joosten (2007) also warn specifically against teachers adding too much content to their BL courses, which may result in them not having time to provide feedback to the students on all the assignments they give them. Likewise, Roschelle, et al. (2000) stress the need for "frequent interaction and feedback" (p. 76 [abstract]) between teachers and students. Thus, the need for adequate pedagogical support of teachers learning to teach in a BL environment, which was previously mentioned, has been reconfirmed.

One item that was not mentioned on Scale 5, Facilitation, on the WEBLEI questionnaire, but which was an issue in the student interview data, is that of *communication*. The students' comments centered on two aspects: The teachers' ability to give clear directions in the classroom and the students' ability to understand oral directions. The researcher observed that all of the teachers tended to give the students good directions on what to do and how to do it in person, in the classroom, and in writing online. This is supported by comments from Jennifer's and Sandra's students. However, students in Jennifer's, Jim's and Ann's classes reported that they sometimes had trouble understanding their teachers' oral directions. Some of the students who had trouble admitted that their own listening skills might be the cause of the problem. That some students would have this problem is not surprising, given the range of skills that students in this IEP program have in the different skill areas. In other words, students can easily have a lower listening and speaking level than their writing level. The fact that the students rated questionnaire item 19, *Understanding my teacher's directions in the classroom was [easy]* ($M = 4.15$, $SD = .99$) fairly high also seems to indicate that the problem was limited. Nonetheless, these results indicate that teachers need to be aware of their students' levels in the different skill areas and try to make sure that everyone understands the directions they give. One way of doing this, which lends itself well to a BL course with a significant online portion, is to provide directions in writing as well as orally.

Turning to the differences between the individual teachers, their Scale 5 ratings ranged from a mean of 3.79 ($SD = .85$) for Ann to a mean of 4.40 ($SD = .74$) for Sandra in the

Fall 2010 semester and a mean of 4.40 ($SD = .50$) for her in the Spring 2011 semester.

Despite the difference between the two ratings, the ANOVA that was performed showed no significant differences in the teacher ratings on Scale 5, Facilitation, $F(5, 35) = .868, p = .51$. Thus, we cannot claim, with sufficient confidence, that these results would transfer to the general population of teachers and students. These results are supported by two analyses that were conducted to try to determine if the teacher factor had any influence on student opinions across the different WEBLEI scales. The first analysis was a One-way ANOVA that was conducted with the scale means as the dependent factors and the teacher variable as the independent factor. The results listed in Table 21 in the Results chapter demonstrate that the teachers did not have a significant effect on student ratings of the different scales of the modified WEBLEI questionnaire. In addition, a One-Way Between-Subjects Random-Effects Analysis of Variance was conducted on the data to estimate whether classroom teachers accounted for a meaningful amount of variance in post-questionnaire scores (i.e. student ratings of the BL environment). The ANOVA results were not significant $F (5, 35) = .887$ (see Table 23 in the Results chapter), which indicate that the individual teachers do not appear to affect students' scores on the post-questionnaire. With this being said, the data seem to suggest that teacher experience might be a factor in teacher WEBLEI ratings. While a reliable regression analysis could not be conducted due to the limited number of teacher participants the descriptive data suggest that teachers with less experience were rated lower than those with more experience. Additional research will be needed to determine if this is indeed the case.

These results suggest that teachers do not have a statistically significant impact on how the students in the study perceived the BL environment. A detailed search of the literature in the area revealed only one study, Chandra and Fisher (2009), which investigated the possible influence of teachers on student ratings of a BL environment. Chandra and Fisher found that the teacher factor caused a statistically significant difference in student ratings of Scale 2, Interaction, and Scale 4, Results. More specifically, their study involved 11 different high school junior science and senior physics classes, for a total of 302 students and seven teacher participants, and the differences were found when comparing the group of classes taught by the researcher (Chandra) and the group of classes taught by six other teachers. Chandra and Fisher (2009) speculate that several possible reasons that may have caused this difference in WEBLEI ratings, such as the teachers' enthusiasm and commitment, student learning styles and motivation, and student academic ability. However, they are ultimately unable to pinpoint the reason. In their conclusion, they suggest that teacher enthusiasm may be the most important factor, but decide that there is a need for further research on this topic. As a result, the literature also cannot confirm whether teacher experience may be a factor in student WEBLEI ratings.

One could speculate that a possible reason for the WEBLEI rating differences between the teachers in Chandra and Fisher's (2009) study may be teacher training. While the teacher training in the current study was very uniform and thus did not appear to be a factor, it is possible that the BL researcher (Chandra) would know a lot more about how to successfully teach in a BL environment compared to the other high school teachers that

were involved. Unfortunately, Chandra and Fisher (2009) do not specify whether the other teachers received any form of BL pedagogy training prior to participating in the study. Thus, teacher training may also be an important variable, but the current study cannot confirm or deny this; additional research will be needed.

Summary

In sum, the results of the current study provided several interesting insights into the use of blended learning for teaching an IEP writing course. The findings for the individual goals will be summarized next.

The first goal was to investigate whether a teacher training- and support program based on the recommendations of Chickering and Gamson (1987), Kaleta, Skibba, and Joosten (2007), and Rochelle et al. (2000) could meet the needs of teachers as they sought to create a blended learning environment for their students. The results indicated that the teachers in the study found the blended learning training beneficial because it motivated them and provided them with pedagogical reasons for using blended learning in their classes. The amount of training that was needed was fairly minimal and minimal reinforcement was needed throughout the semester. While a lengthy training period may not be needed the teachers do appear to benefit from planning their BL classes in advance. In terms of technical support, the teachers' needs were fairly minimal but they believed that having technical support available is necessary and valuable. Unsurprisingly, the teachers reported finding it difficult to find time in their schedules to seek out additional technical and pedagogical training. However, they appreciated being given control of the

pace and focus of their adoption of technological tools. On the topic of technology, one teacher found it more difficult to integrate her regular classes with her lab days because she was scheduled to teach in a room with no computer projector. This highlights the value of, and need for, administrative support of blended learning teaching initiatives. Most of the teachers found it very beneficial to form a community of practice around their teaching of their writing course. It had several positive effects on their teaching experience and the quality of their classes. One teacher preferred not to collaborate with his colleagues and his experience highlights the need for support personnel to provide continuous guidance and reinforcement of the BL pedagogical training. It was also found that the BL environment had a positive impact on classroom dynamics. For example, students worked more autonomously and focused in the computer labs and became more responsible for their own learning. This, in turn, enabled the teachers to better provide personalized assistance to the students and keep track of their progress, just like they were able to cover more materials during the course of the semester. In addition, teaching in a BL environment, caused the teachers to feel more busy and challenged in the beginning of the semester. However, this changed as the semester progressed and towards the end they reported feeling more relaxed and that their planning had become easier. In general, all of the participating teachers expressed great satisfaction with their BL experience and indicated that they would continue to use BL for their future courses.

The second goal of this study was to measure the students' perceptions of the blended learning environment with respect to its productiveness. The results of the

modified WEBLEI questionnaire provided a detailed view of the students' opinions on the four topics of Access, Interaction, Response and Result. On the topic of Access the students had a positive view of their ability to access the on-campus and online materials. Whereas the course provided students somewhat less control over what to study, when to study, and what goals to pursue, this is a function of the IEP focus and not a BL issue. Minor technical issues with computer equipment were reported by the students though none of them had any significant impact on the students' experience or ability to access their learning materials. In terms of Interaction the students often experienced productive participation, collaboration and cooperation in the BL environment. Thus, it was found that teaching an IEP writing class in a blended learning environment promoted student peer-to-peer interaction, student-teacher interaction, and had a positive influence on learner independence and self-discipline. Interestingly, there seems to be a mismatch between how much self-discipline is required of the students and how much they perceive is needed. One reason for this could be that the teachers end up providing so much guidance and so many step-by-step directions that it affects student needs to be independent and self-disciplined. Nonetheless, teachers did find that some students showed improved engagement, autonomy, and responsibility.

The student ratings of the third scale of Response showed that students had positive experiences of their ability to learn within a blended learning environment. While students seemed somewhat uncertain about the feelings of satisfaction, achievement, and interest in the blended learning writing course they were positive about their feelings about the online

and classroom activities. They also indicated that they liked learning in this blended environment and that they believed the course improved their writing skills. Other positive aspects mentioned by the students include the ability to practice studying with computers and gaining practice with typing in English.

On the topic of Results, the fourth scale on the WEBLEI, the students found that the purpose of the lessons were clear and easy to follow. In addition, they indicated they understood the expectations of the assignments, felt that course content was well planned and clear and that learning writing in this blended learning environment worked well. They also found that there was a good balance between online and classroom activities and indicated that given the choice, most of them would prefer to learn in a blended learning environment. Thus, according to the students, writing courses taught in a blended learning environment are a viable alternative to regular face-to-face classroom courses.

The third and final goal of this study was to discover how students experienced the teacher's practice and behavior and the extent to which these factors affected student perceptions of the course and blended learning environment in general. The results from Scale 5, Facilitation, indicate that students had a very positive view of their teachers' practice and behavior in the BL environment. This suggests that the teachers often behaved in a way that was consistent with good practice in the undergraduate classroom as outlined by Chickering and Gamson (1987). The results also describe the teachers as well-prepared and attentive to student needs, focused on their work in the classroom, and good at challenging the students to perform at their best. The student ratings also indicate that they

prefer to learn in different ways, using different activities and in different places. Another aspect of their interactions with their teachers concerned their communication. Students lauded their teachers for giving clear directions in the classroom but some complained of having trouble understanding their teacher's spoken English. While this is not solely the teachers' fault the findings indicate that they do need to be aware of their students' levels in the different skill areas and try to make sure that everyone understands their directions. On the topic of whether individual teacher practice and behavior affect their students' opinions of the BL environment the results of the statistical measurements indicate that this was not the case. However, the findings do suggest that there may be an effect for teacher experience in terms of how students rate the individual WEBLEI scales, except for Scale 4. However, the available data do not allow for any generalization of this to the general population of teachers and learners.

With this general summary of the findings for the current study it is necessary to look in more detail at some of the limitations that affected the results of this study. Likewise, it is important to look at the practical and theoretical implications that this study has for the use of blended learning in the area of second language acquisition and general education. Moreover, we need to decide what these results may mean for the area of teacher training for blended learning instruction. These issues will be discussed next.

Limitations

Like most studies, this study also encountered a few limitations that should be taken into consideration when interpreting the results. The first limitation concerns the fact that

the student participants had to meet in labs for their online work. This requirement was needed to satisfy the IEP attendance policies at the time. Many studies investigating the use of blended learning have students work independently at home or unsupervised in labs for their online sessions. This difference could have affected the study results in a number of ways. First, it is possible that both students and teachers would change their opinions about learning and teaching in a BL environment. However, these changes could be both positive and negative. For example, teachers may feel less in control of their classes while students may feel that there is a social element missing due to the reduced time together with their peers and their teachers. Likewise, the level of student self-discipline required would be even higher. It is also possible that some students would not be able to administer this additional freedom during unsupervised online time and thus would learn less, resulting in worse overall course performance. Conversely, some students did mention in their interviews that they would have liked to conduct the online sessions from home, so they might have expressed even greater enthusiasm for the BL environment. In the same vein, the teachers might have appreciated the added flexibility of not having to be in a physical classroom two days a week. Two pieces of evidence support this: First, when they were sick, teachers were often able to ask another teacher to include their students in their lab class. The teacher who was sick then simply put directions for his or her students on the course Moodle page with links to online activities and assignments. Second, since they participated in this study several teachers have experimented with synchronous online session where

students could attend from home or any open lab on campus. Anecdotal evidence suggests that this has generally been a positive experience for teachers and students.

Another issue that likely affected the data quality of this study concern the low number of students in the individual classes. The low number of participants in each participating class likely had a negative effect on the statistical measurements that compared the classes and teachers. However, the issue of lack of research participants is well-known and not likely to improve anytime soon.

One final limitation concerns the mix of nationalities among the student participants. The overwhelming majority were young Chinese with no prior college experience. Considering the often stark contrasts that teachers experience between these students and those of other nationalities, who are often older, more mature, and/or have prior college experience in their home countries, the results could very well have come out somewhat different.

Practical Implications for Teaching ESL in Blended Learning Environments

Based on the findings of this study several practical recommendations can be made for language teaching programs that wish to implement blended learning. Inspired by Kaleta, Skibba, and Joosten (2007) this advice is expressed as a checklist. The items in the list are not ordered by importance.

- Encourage the formation of a community of practice to allow the teachers to benefit from cooperating on their planning and materials and assessment creation.

- Ensure good pedagogical and technical support for the teachers.
- Provide extra pedagogical support to teachers who do not wish to or are not able to collaborate with other teachers in their initial semester of employing blended learning.
- Conduct pedagogical and technical training prior to the semester when teachers start using blended learning.
- Allow teachers enough time prior to the beginning of the semester to get comfortable with the online environment and to practice preparing materials and activities for it.
- Allow teachers to experience and discover the online learning environment at their own pace and control the pace of their application of various technical tools such as different features of the content management system.
- Ensure administrative support, such as for the allocation of media-equipped rooms that better allow for integration of the two teaching modes.
- Conduct learner training as necessary to educate students about the reasons for using BL and ensure that they gain the necessary technical skills to fully benefit from the online environment.
- Supervise students during online work until the teacher is satisfied that they can navigate the online environment and use their online time effectively, before experimenting with synchronous or asynchronous online meetings. This advice is

based on the fact that the teachers in this study reported it took students two to three weeks to get used to how and what to do in the lab.

Theoretical Implications for Researching Blended Learning ESL Environments

Based on the findings of this study it is possible to suggest some directions for future research in the area of blended language learning. First of all, teacher training procedures and programs for preparing ESL, EFL, and higher education faculty for teaching with blended learning need to be researched in greater depth. This area is not very well covered in the literature in their respective areas. Thus, future studies should seek to involve more teachers who are representative with regard to age, experience, gender and pedagogical and technical knowledge. Furthermore, training procedures and topics should be documented and data collected from all of the participants, including administrators and technical and pedagogical support personnel. In addition, it would be beneficial to investigate the value and use of teacher collaboration in greater depth. This should be done with a research lens that establishes how to best support teachers in situations when a community of practice can be formed and, just as importantly, when it cannot.

Another area that deserves attention in future research is the composition of learners with regard to factors such as linguistic and cultural backgrounds, age, maturity, language proficiency, and prior college experience. There are indications in the current study that all of these factors may have had an influence on the results. Thus, future studies should attempt to control for these factors and investigate their individual influence on the success of blended learning environments. These future studies should also be conducted

with more student participants to provide for better statistical data. Moreover, additional research is needed that investigates the use of BL for other language teaching skills and levels, including content-based courses that mix the individual skills. While writing lent itself very well to online instruction, skill areas such as listening or speaking may require different pedagogical skills of the teachers and possibly a greater knowledge of technology. On this topic, it would be very interesting to investigate BL environments in which students are not required to do their lab work on-campus or under the supervision of their teacher. This is likely to introduce a variety of additional factors and variables that have a strong potential to affect the efficiency and effectiveness of the BL environment as well as teachers' and students' perceptions.

When conducting this research both quantitative and qualitative data should be collected. The teacher and student interviews provided valuable information that would otherwise have been lost. Alternatively, survey instruments should be constructed to give teachers and students the ability to voice their opinion on the topics and categories that surfaced in the qualitative data in the current study. Lastly, with regard to quantitative data collection, the modified WEBLEI questionnaire turned out to be an excellent instrument for collecting learner perceptions of the learning environment. It demonstrated very high reliability and the addition of Scale 5, Facilitation, allowed data to be collected on a very important aspect of the learning environment, namely teacher performance.

Concluding Remarks

This study sought to investigate how to prepare ESL teachers to create a productive blended learning environment for students in an intensive English program writing course. The question of how to best train and prepare teachers was selected as the starting point not just because it is only sparsely covered in the literature but also because it is the author's firm belief that this is a key element in the successful application of blended learning in higher education. Prior to conducting this study the author has worked with faculty pedagogical and technical support for several years. Based on his experience, faculty often do not have the needed pedagogical and technical knowledge to create a high-quality learning experience for students in a blended learning environment. Often times, pedagogical development is left to the faculty members to pursue on their own and technical support is provided as an after-thought on a very limited basis. Fortunately, the author also experienced being part of a forward-thinking and innovative department of Curriculum and Instruction where faculty had extensive pedagogical knowledge about distance and blended learning and where technical support was prioritized highly. This experience taught him about the value of having pedagogically well-trained faculty who are given the technical support they need. In combination, these two factors can lead to very successful online and blended learning and create a motivating and rewarding environment where students can perform to the best of their abilities. As a result, the current study took its starting point in teacher training and support and subsequently focused on investigating the value and quality of the resulting blended learning environment from the points of view

of the main participants. Various factors and variables were also investigated due to their potential for affecting the value and quality of this blended learning environment. Thus, student perception of the environment and of their teachers' practice and behavior were included.

The results of the study provided valuable and detailed information about how different teachers and students experienced teaching and learning in a blended learning environment. Thus, the data that was collected can help all of the principal actors in institutions of higher education better implement blended learning, which is on the agenda of many institutions: Administrators can learn what kind of support infrastructure should be budgeted to support teachers who are expected to teach in blended learning environment; technical and pedagogical support staff can learn what support to provide and how to provide it; teachers can learn what to expect and how to make the process of adopting blended learning as effective and easy as possible; and finally, teachers can learn how to prepare their students to benefit the most from learning in a blended learning environment.

Needless to say, the results of this study are not just cut-and-dry facts that these principal actors can rely on to the exclusion of other sources. Rather, the results help inform the different bodies of knowledge and fill some of the gaps in this knowledge. The end result is a study that spans the areas of blended learning in higher education, second language acquisition, and teacher training and support. Considering that blended learning is growing in popularity and is being used more and more in higher education this study, and the topic in general, are valuable additions to the aforementioned bodies of knowledge.

Future studies will undoubtedly be conducted in these and other related areas and it is the author's hope that the results of this study may help guide future research. For the author, the experience of conducting this study has been both enriching and inspiring. It has helped lay the foundation for what will hopefully be a career in higher education dedicated to the pursuit of evermore enriching, effective, interesting, and motivating teaching and learning experiences for teachers and students.

APPENDIX A: TOBIN FRAMEWORK CATEGORIES

Emergent categories salient to the learning environments of students using the CCL

Category	Description	Dimension
Convenience	Students accessed learning activities at convenient times.	Emancipatory activities
Efficiency	Not having to attend on campus classes allowed for efficient use of time.	Emancipatory activities
Autonomy	The CCL allowed participants autonomy to decide when and how to access the curriculum.	Emancipatory activities
Flexibility	Flexibility allowed students to meet their goals.	Co-participatory activities
Reflection	Asynchronous interactions using the CCL encouraged reflective interactions.	Co-participatory activities
Quality	The quality of learning reflected the level of activity of the students.	Co-participatory activities
Interaction	The CCL enabled participants to interact with others asynchronously.	Co-participatory activities
Feedback	Feedback was available from students and the instructor.	Co-participatory activities
Collaboration	The CCL enabled participants to collaborate in a variety of activities.	Co-participatory activities
Enjoyment	Enjoyment was associated with academic success and mastery of technology.	Qualia
Confidence	Confidence was associated with successful learning and support for learning.	Qualia
Accomplishments	The CCL allowed students to display their course accomplishments regularly and publicly.	Qualia
Success	Two dimensions of success pertained to the use of technology and conceptual aspects of the program.	Qualia
Frustration	Frustration was associated with the use of technology and conceptual aspects of the program.	Qualia
Tedium	Tedium was associated with posting and responding to critical reviews on a regular basis in consecutive semesters.	Qualia

From: Tobin, K. (1998). Qualitative perceptions of learning environments on the world wide web. *Learning Environments Research* 1, 139-162.

APPENDIX B: WEBLEI SCALES AND ITEMS

Table 1.1. WEBLEI Scales and Items

Scale I: Access
1. I can access the learning activities at times convenient to me.
2. The online material is available at locations suitable for me.
3. I can use time saved in travelling and on campus class attendance for study and other commitments.
4. I am allowed to work at my own pace to achieve learning objectives.
5. I decide how much I want to learn in a given period.
6. I decide when I want to learn.
7. The flexibility allows me to meet my learning goals.
8. The flexibility allows me to explore my own areas of interest.
Scale II: Interaction
1. I communicate with other students in this subject electronically (email, bulletin boards, chat line).
2. In this learning environment, I have to be self-disciplined in order to learn.
3. I have the autonomy to ask my tutor what I do not understand.
4. I have the autonomy to ask other students what I do not understand.
5. Other students respond promptly to my queries.
6. I regularly participate in self-evaluations.
7. I regularly participate in peer-evaluations.
8. I was supported by positive attitude from my peers.
Scale III: Response
1. This mode of learning enables me to interact with other students and the tutor asynchronously.
2. I felt a sense of satisfaction and achievement about this learning environment.
3. I enjoy learning in this environment.
4. I could learn more in this environment.
5. It is easy to organise a group for a project.
6. It is easy to work collaboratively with other students involved in a group project.
7. The web-based learning environment held my interest throughout my course of study.
8. I felt a sense of boredom towards the end of my course of study.
Scale IV: Results
1. The scope or learning objectives are clearly stated in each lesson.
2. The organisation of each lesson is easy to follow.
3. The structure keeps me focused on what is to be learned.
4. Expectations of assignments are clearly stated in my unit.
5. Activities are planned carefully.
6. The subject content is appropriate for delivery on the Web.
7. The presentation of the subject content is clear.
8. The quiz in the web-based materials enhances my learning process.

WEBLEI Questionnaire – copied from Chang and Fisher (2003).

APPENDIX C: KEY COMPONENTS OF A BLENDED LEARNING TEACHER

TRAINING COURSE

1. Begin the course redesign process by re-examining course goals and objectives and by considering how they can best be achieved in the hybrid environment.
2. Develop new learning activities that capitalize on the strengths of the online and face to face learning environments.
3. Integrate face to face and online activities to avoid teaching two parallel and unconnected courses.
4. Learn to make the transition from a lecture-centered teaching approach to a more learner-centered teaching focus.
5. Avoid the common tendency to cover too much material and include too many activities in the redesigned course that result in a “course and a half.”
6. Acquire and practice the skills needed to effectively manage and facilitate online discussion and interaction
7. Learn to create an online community of learners by providing an inclusive, positive, and friendly learning environment where students feel safe sharing ideas.
8. Keep technology use simple in order to avoid turning the course into a support nightmare and gradually add more advanced technology.
9. Develop a plan for conducting activities when technology fails.
10. Manage student expectations regarding the hybrid format and course workload.
11. Identify and develop plans, materials, and activities to help students with the technology and time management challenges many encounter.
12. Use the tools in the course management system to get organized and stay organized when teaching hybrid courses.

Reproduced from Kaleta, Skibba, & Joosten (2007, pp. 138-139).

APPENDIX D: WRITING LEVEL 4 AND 5 OUTCOMES

Writing 4 Outcomes

1. Write 4-5 paragraph essay (e.g., compare and contrast, cause and effect, definitions) with an introduction with a thesis statement, body paragraphs with good topic sentences, and an appropriate conclusion.
2. Revise to improve organization, unity and coherence.
3. Write a summary of the main points of a two-page reading done as class work, referring to its source.
4. Write a paraphrase of a 300-word reading done as class work, referring to its source.
5. Use transitional clauses to move from one point to another in a 4-5 paragraph essay.

Writing 5 Outcomes

1. Write 5-6 paragraph essays with an introduction with a thesis statement, body paragraphs with good topic sentences, and an appropriate conclusion.
2. Use correctly cited outside sources in a well-developed 5-6 paragraph academic essay.
3. Evaluate sources of information for relevance and quality.
4. Understand and avoid plagiarism.
5. Use transitional sentences to move from one point to another in a 5-6 paragraph essay.

APPENDIX E: LEARNER TRAINING ACTIVITIES AND PREPARATION MATERIALS

The following set of activities and information is intended to help you prepare to teach your Writing 4 students about Blended Learning. Feel free to suggest modifications to the reasoning and activities to me [the researcher]. I will try to incorporate whatever you might send me. If you do not receive any further notes about this, please use it as it is presented below. Feel free to make minor changes to suit your class. However, please try to stay true to the core message. I need to know that the training the students got was reasonably uniform, since I will later ask them about their view of the training they got. You will probably need to do this in a computer lab, since the final activity is an online forum discussion. You might want to add your own introductory activity or other warm-up while you wait for stragglers...

- Ask SS what their best experience is using computers to help them learn English
 - Elicit and discuss for 2-3 minutes
 - Some SS may have no experience learning with computers, but they can then say what they THINK would be good to do on computers
- Ask SS what their best experience is learning English in a classroom (without using computers)
 - Elicit and discuss for 2-3 minutes
- Try to slowly advance the view that apparently computers are good for some things and working without them in the classroom is good for other things
- Ask SS to quickly discuss advantages and disadvantages of the following methods of getting information and decide which they think is better/easier. You can write these on the board or screen, if you want, so they can remember them, or hand them out on slips of paper:
 - paper-based vs. electronic dictionaries
 - writing by hand vs. on computer
 - writing an mailing a letter vs. writing and sending an email
 - finding information in a paper-based encyclopedia vs. online (Wikipedia or other source)
 - filling out exercise on paper in the classroom and handing it in to the teacher for feedback vs. doing exercise on computer which gives you feedback right away (feedback from computer is right away – from teacher it takes more time, but is also sometimes better feedback)

- Elicit pros and cons from students for 5-7 minutes focusing on the positive aspects of using computers while acknowledging and validating any negative experiences students may have had. Don't dwell on negative experiences. I would expect many SS to think using technology/computers is easier, faster, and more effective. Try to enforce these aspects.
 - Conclude that when we want to find information and increase our knowledge it is sometimes more effective to work online
 - Other times, when, for example, we need to get help from our teacher, it is more effective to be in the classroom.
 - Combining these two ways of learning at the university is called BLENDED LEARNING
- Point out BL relevance to students:
 - Many universities are now combining classroom learning with online learning via computers
 - When you start to take college courses, you will experience this for sure
 - In many courses you will only meet in class once or twice a week and then have to work on your own the rest of the time. A lot of the time you will have to use computers when you work alone.
 - They may not be used to this form of learning in their home countries, but in this class they can practice it
 - Students who have experience with this will learn faster and easier
 - Ask if SS have any questions
- In this course we want to try to blend or mix classroom and online learning to make the teaching of English even more effective and interesting
 - This means you (SS) will need to learn how to effectively use the computers and online resources to learn English with.
- It also means that sometimes you (SS) will need to do some activities alone or with your classmates, without getting help from the teacher.
 - BUT, the teacher will help you learn the best way with the computer
- We have prepared a lot of interesting activities for you this semester, which we can only do because we will use the computers more in this class
- This semester, you will learn how to become more effective learners, while we teach you English
- This class focuses on practicing writing

- Like discussed before, using computers for writing can be much more effective
- We can also do great activities on the computers that we can't do in the classroom. For example, we can use discussion forums where we practice writing down our reasons and arguments when we discuss something. Writing this down is also what we do when we write papers: We try to convince the reader of our point of view by using good arguments and sources.
- Activity (10-15 minutes):
 - Ask SS to debate a topic in a forum. They each have to post a quick reply to a question you have asked them.
 - Then, they must reply to someone else's posting and say why or why not they agree.
 - Round up activity by bringing up some of the better replies on the screen and pointing out why they are good – such as well argued, coherent, detailed, etc.
- Let students know that from today on, they will slowly learn how to better use computers to learn with. You will sometimes ask them to work independently in the computer lab, but you will always be ready to help them learn. (This is exactly what your role will be in the computer lab – guides and facilitators, not 'providers of ready-made answers' ;o))
- From here on, you can move into other activities in the lab, the training is done for now. However, keep the reasons above in mind, if students later question the usefulness or rationale of an online activity.

APPENDIX F: TEACHER PARTICIPANT DATA

Teachers	Ann	Jim	Jennifer	Sandra	Harry	M	SD
Gender	F	M	F	F	M		
Age	29	31	25	35	48	33.60	8.82
Native Language	English	English	English	English	English		
Highest level of education	MA (App. Ling.)	MA (TESOL)	MA (TESOL)	MA (TESOL)	MA (TESOL)		
Teaching experience	4 years	6 years	3 years	10 years	10	6.60	3.29
Experience teaching writing	Yes	Yes	Yes	Yes	Yes		
Experience teaching this level	No	No	No	No	Yes		
Prior computer lab use with writing students	Yes	Yes	Yes	Yes	Yes		
Prior BL experience	None	None	None	Some*	None		

*Participated in BL study with a focus on listening and speaking conducted by another PhD student one year earlier.

APPENDIX G: STUDENT PRE-QUESTIONNAIRE

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask your teacher.

Name: First: _____ Last: _____

Gender: () female () male Age: _____

What country are you from? _____

What is your native language? _____

For how many years total have you studied English? _____

How old were you when you started to study English? _____

Where have you studied English? (tick as many as needed)	How many years in each place?
--	-------------------------------

- | | |
|--|-------|
| <input type="checkbox"/> Kindergarten | _____ |
| <input type="checkbox"/> Elementary School | _____ |
| <input type="checkbox"/> High Schools | _____ |
| <input type="checkbox"/> Language Schools | _____ |
| <input type="checkbox"/> Private Schools | _____ |
| <input type="checkbox"/> College | _____ |

What English classes are you taking now? (list your IEOP class names)

Are you taking any other ISU courses now, besides IEOP courses?

Are you also studying English somewhere else this semester, or alone?

School (Which school _____)

Alone

What are you studying (for example, “studying for TOEFL”, or “studying with my own grammar book”)?

If you have ever taken a standardized English test, such as IELTs or TOEFL, please list your *last attempt* and what your score was:

The name of the test was (circle your test): Institutional TOEFL – TOEFL IBT – IELTS – ACT –

SAT

My score was: _____

I took the test in _____ / _____ (month / year)

How many *hours per week* do you spend using English outside class to... (circle the most appropriate answer)

Activity	Number of hours per week				
	0	1-2	3-4	5-6	7 or more
Do homework	0	1-2	3-4	5-6	7 or more
Prepare for quizzes and exams	0	1-2	3-4	5-6	7 or more
Read for fun	0	1-2	3-4	5-6	7 or more
Play computer games	0	1-2	3-4	5-6	7 or more
Listen to music	0	1-2	3-4	5-6	7 or more
Watch TV, videos and movies	0	1-2	3-4	5-6	7 or more
Talk to friends	0	1-2	3-4	5-6	7 or more
Browse websites	0	1-2	3-4	5-6	7 or more
Shop online	0	1-2	3-4	5-6	7 or more
Listen to language tapes	0	1-2	3-4	5-6	7 or more
Online text chatting	0	1-2	3-4	5-6	7 or more
Online voice chatting (Skype, MSN, etc.)	0	1-2	3-4	5-6	7 or more
Write e-mails	0	1-2	3-4	5-6	7 or more
Have you ever studied or lived in another English-speaking country (UK, Canada, Australia, etc.)? Yes _____ No _____					

If yes, how long were you there? _____

What did you do there (for example, *travel* or *study English*)?

Please list any other languages you know and your proficiency in each language.

Language	Proficiency (please circle your choice)		
	Beginner	Intermediate	Advanced
_____	Beginner	Intermediate	Advanced
_____	Beginner	Intermediate	Advanced
_____	Beginner	Intermediate	Advanced

	Beginner	Intermediate	Advanced
--	----------	--------------	----------

How well do you think you know English? Circle your proficiency for each skill

*1=beginner, 2= high beginner, 3=low intermediate,
4=intermediate, 5=high intermediate, 6=advanced*

Reading	1	2	3	4	5	6
Writing	1	2	3	4	5	6
Speaking	1	2	3	4	5	6
Listening	1	2	3	4	5	6
Vocabulary	1	2	3	4	5	6
Grammar	1	2	3	4	5	6

Adapted from Mackey, A. & Gass, S. (2005). *Second language research: Methodology and design*. Mahwah, New Jersey: Lawrence Erlbaum Associates, p.125-126.

APPENDIX H: TEACHER PRE-QUESTIONNAIRE

Name: _____ Research code: _____
 Gender: () female () male Age: _____ Mother tongue: _____
 - -
 Country: _____
 Occupation (e.g., teacher, administrator, etc): _____
 Highest level of education attained (e.g. B.A. in Applied linguistics):

 Years of teaching experience: _____

1. How many classes do you typically teach each semester?
-

2. How many students do you have in a class, on average?
-

3. What age groups and levels have you taught? (select all that apply)
 Children () Teenagers () Adults ()

4. What classes have you taught in IEOP? (select all that apply)
 Reading () Writing () Grammar ()
 Listening/Speaking () Other () _____

5. What reading levels have you taught in IEOP? (select all that apply)
 Level 1 () Level 2 () Level 3 ()
 Level 4 () Level 5 () Level 6 ()

6. What writing levels have you taught in IEOP? (select all that apply)
 Level 1 () Level 2 () Level 3 ()
 Level 4 () Level 5 () Level 6 ()

7. What kinds of activities do you typically do with your reading classes?
-
-
-

8. What kinds of materials/resources do you use in your reading classes?

9. Are there any other resources you have available but have not had the chance to use?

10. Do you use the computer lab with your reading students?

No Yes

11. Do you use the computer lab with your writing students?

No Yes

12. If you use the computer lab, what kinds of activities do you do on your lab days?

Reading: Writing:

13. Can you mention a couple of activities that worked really well with your classes?

Reading: Writing:

14. What challenges/difficulties do you have when you teach?

Reading: Writing:

15. If you could make changes to the way you teach, what would you like to change?

Reading: Writing:

Continued next page

16. Have you ever used Blended learning pedagogy in any of your classes?

No Yes

If you answered yes, how?

If you answered no, why not?

I don't know much about Blended Learning. ()

I have never had the opportunity to use Blended Learning in with my classes. ()

I know about Blended Learning but do not feel comfortable with using technology. ()

I know about Blended Learning but do not feel comfortable with trying to implement it. ()

Other reason () Please explain:

17. Please add any other comments or questions.

APPENDIX I: STUDENT POST-QUESTIONNAIRE

Blended Learning Student Questionnaire V. 2

1. Student Information

Please enter your full name and your English nickname, if you have one.

Who was your teacher in this Writing 4 class?

Blended Learning Student Questionnaire V. 2

2. Student Post Questionnaires 1 + 2

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree
1. I liked the online activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The online activities helped me learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I liked learning in the computer lab.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I liked the classroom activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The classroom activities helped me learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I liked learning in the classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. This course improved my reading skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. This course improved my writing skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. This course improved my speaking skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. This course improved my listening skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Strongly disagree	Somewhat disagree	Neither Agree or Disagree	Somewhat agree	Strongly agree
11. There was a good balance between online and classroom activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. The online and classroom activities worked well together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I got the technical support I needed during this course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I understand why this course mixed online and classroom activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I would like my other English courses to be taught like this course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. My teacher seemed like he/she liked to teach this class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Blended Learning Student Questionnaire V. 2**3. Student Post Questionnaire 2****Please rate each of the topics below**

	Difficult	Somewhat difficult	Not easy or difficult	Somewhat easy	Easy
17. The instructions for the online activities were...	<input type="radio"/>				
18. Getting technical support was...	<input type="radio"/>				
19. Understanding my teacher's directions in the classroom was...	<input type="radio"/>				

Blended Learning Student Questionnaire V. 2

4. Student Post Questionnaire 3 - WEBLEI Scales 1+2

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Almost Never	Seldom	Sometimes	Often	Almost Always
20. I can access the learning activities at times convenient to me	<input type="radio"/>				
21. The online material is available at locations suitable for me	<input type="radio"/>				
22. I am allowed to work at my own speed to achieve learning objectives	<input type="radio"/>				
23. I decide how much I want to learn in a given period	<input type="radio"/>				
24. I decide when I want to learn	<input type="radio"/>				
25. Using Blended Learning allows me to meet my learning goals	<input type="radio"/>				
26. Using Blended Learning allows me to explore my own areas of interest	<input type="radio"/>				

Blended Learning Student Questionnaire V. 2

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Almost Never	Seldom	Sometimes	Often	Almost Always
27. I communicate with other students in this subject electronically (email, discussion forums)	<input type="radio"/>				
28. In this Blended Learning environment, I have to be self-disciplined in order to learn	<input type="radio"/>				
29. I have the freedom to ask my teacher what I do not understand	<input type="radio"/>				
30. I have the freedom to ask other students what I do not understand	<input type="radio"/>				
31. Other students respond promptly to my requests for help	<input type="radio"/>				
32. I am regularly asked to evaluate my own work	<input type="radio"/>				
33. My classmates and I regularly evaluate each others' work	<input type="radio"/>				
34. I was supported by a positive attitude from my classmates	<input type="radio"/>				

Blended Learning Student Questionnaire V. 2

5. Student Post Questionnaire 3 - WEBLEI Scales 3+4

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

GLOSSARY

(Question 35)Asynchronously:

When you can respond to someone online or via email without being online at the same time. For example, For example "My classmate and I were working asynchronously. I posted my question in the online forum and two hours later he replied. An hour after that I replied to him."

(Question 42) bored with:

"Tired of". For example, ""I am tired of having nothing to do"

	Almost Never	Seldom	Sometimes	Often	Almost Always
35. Using Blended Learning makes me able to interact with other students and the teacher asynchronously	<input type="radio"/>				
36. I felt a sense of satisfaction and achievement about this Blended Learning environment	<input type="radio"/>				
37. I enjoy learning in this Blended Learning environment	<input type="radio"/>				
38. I could learn more in this Blended Learning environment	<input type="radio"/>				
39. It is easy to organize a group for a project	<input type="radio"/>				
40. It is easy to work together with other students involved in a group project	<input type="radio"/>				
41. The Blended Learning environment held my interest throughout the course	<input type="radio"/>				
42. I felt bored with this course when we got to the end of the semester	<input type="radio"/>				

Blended Learning Student Questionnaire V. 2

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Almost Never	Seldom	Sometimes	Often	Almost Always
43. The learning objectives are clearly stated in each lesson	<input type="radio"/>				
44. The organization of each lesson is easy to follow	<input type="radio"/>				
45. The structure of the Blended Learning environment keeps me focused on what is to be learned	<input type="radio"/>				
46. Expectations of assignments are clearly stated	<input type="radio"/>				
47. Activities are planned carefully	<input type="radio"/>				
48. The content of my Writing 4 course worked well in a Blended Learning environment	<input type="radio"/>				
49. The presentation of the Writing 4 content was clear	<input type="radio"/>				
50. The quizzes enhance my learning process.	<input type="radio"/>				

Blended Learning Student Questionnaire V. 2

6. Student Post Questionnaire 3 - WEBLEI Scale 5

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Almost Never	Seldom	Sometimes	Often	Almost Always
51. The teacher is prepared and available to answer my questions	<input type="radio"/>				
52. The teacher encourages students to work together and help each other	<input type="radio"/>				
53. The teacher encourages me to learn in different ways	<input type="radio"/>				
54. The teacher gives me quick comments on my work	<input type="radio"/>				
55. The teacher is focused on our work during class time	<input type="radio"/>				
56. The teacher expects me to do my best	<input type="radio"/>				
57. The teacher respects my individual way of learning	<input type="radio"/>				

If you have anything else you would like to say about this class, please write it in this box.

Blended Learning Student Questionnaire V. 2**7.**

Thank you very much for answering this survey and for participating in my dissertation data collection. I appreciate your help!

APPENDIX J: TEACHER POST-QUESTIONNAIRE

Blended Learning Teacher Questionnaire V. 2

1. Teacher Information

Please select your name

Blended Learning Teacher Questionnaire V. 2

2. Teacher Questionnaire Part 1

Please answer the questions below to the best of your ability. If you are in doubt about how to answer a question, please ask the researcher.

	Strongly disagree	Somewhat disagree	Neither Agree or Disagree	Somewhat agree	Strongly agree
1. After getting the BL training I felt pedagogically prepared to teach this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I received the BL pedagogical support I needed during the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I had enough influence on the course content and activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. There was a good balance between online and classroom activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The online and classroom activities integrated well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I made an effort to integrate classroom and lab activities with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I felt technically prepared to teach this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I received the technical support I needed during this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Using BL did not make this course more demanding to teach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I would like to teach other ESL courses using BL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. My teaching style matches well with BL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. The online activities worked well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. The classroom activities worked well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Blended Learning Teacher Questionnaire V. 2**Please rate each of the topics below**

	Difficult	Somewhat difficult	Not easy or difficult	Somewhat easy	Easy
14. Getting technical support was...	<input type="radio"/>				
15. Managing the online activities was...	<input type="radio"/>				
16. Managing the classroom activities was...	<input type="radio"/>				
17. Integrating the online and classroom activities was...	<input type="radio"/>				

Please add any other information you feel is important about your experiences teaching this course

Blended Learning Teacher Questionnaire V. 2**3.**

Thank you very much for taking the time and making the effort to participate in my study and helping me with my data collection. I appreciate it!

APPENDIX K: STUDENT POST INTERVIEW QUESTIONS

1. Why are you studying in [IEP program]?
2. Would you recommend this course to a friend? Why?
3. In the beginning of the semester your teacher did some blended learning training with you. How would you describe this training?
4. Did you do all the activities in the course? Why or why not?
5. Do you feel this course has any advantages for the students? Which?
6. Do you feel this course has any disadvantages for the students? Which?
7. In which classes did you work most actively: when you were in the classroom or when you had lab days? Why?
8. Did you do all the online assignments? Why or why not?
9. What did you like the most about this course?
10. What did you like the least about this course?
11. Would you like to take more courses that use blended learning? Why?
12. If you could suggest changes to this course what would you suggest?

APPENDIX L: TEACHER POST INTERVIEW QUESTIONS

1. What do you think about Blended Learning?
2. What do you think about the experience of creating a Blended Learning course?
3. What challenges did you face when creating activities and implementing this Blended Learning course?
4. Were there any activities in the course that you found difficult to create?
5. Do you feel this course has any advantages for the teachers?
6. Do you feel this course has any advantages for the students?
7. Do you feel this course has any disadvantages for the teachers?
8. Do you feel this course has any disadvantages for the students?
9. How would you describe the planning and preparation for this course and the training you received at the beginning of the semester?
10. What did you like the most about this course?
11. What did you like the least about this course?
12. Would you like to teach another Blended Learning course? Why or why not?
13. If you were to teach this course again, what would you change? Why?
14. How would you describe the amount of support available to you during the semester?
15. What impact do you think the Blended Learning training you did with your students had?

APPENDIX M: RESEARCHER OBSERVATION SHEET

Date: _____ FTF Lab

Teacher name

Monday:	Building/Rm. #
Tuesday:	Building/Rm. #
Wednesday:	Building/Rm. #
Thursday:	Building/Rm. #
Friday:	Building/Rm. #

On-task

Student Names	10	20	30	40	Comments

References

1 2 3 4 5 6 7 8 9 10 11 12 Comments:
 13 14 15 16 17 18 19 20
 21 22 23 24 25

Observations

Time	Comments

Other remarks about today's class:

REFERENCES

- About Moodle (2011, April 8). Retrieved from http://docs.moodle.org/en/About_Moodle
- Abras, C.N., & Sunshine, P.M. (2008). Implementing distance learning: Theories, tools, continuing teacher education, and the changing distance-learning environment. In S. Goertler & P. Winke (Eds.), *Opening doors through distance language education: Principles, perspectives, and practices*. CALICO Monograph Series (Vol. 7, pp. 175–201). Texas: Computer Assisted Language Instruction Consortium (CALICO).
- Adair-Hauck, B., Willingham-McLain, L., & Youngs, B. E. (2000). Evaluating the integration of technology and second language learning. *CALICO Journal*, 17(2), 296-306.
- Amaral, K. E. & Shank, J. D. (2010). Enhancing Student Learning and Retention with Blended Learning Class Guides. *Educause Quarterly*, 33(4). Retrieved from <http://www.educause.edu/EDUCAUSE%2BQuarterly/EDUCAUSEQuarterlyMagazine>
- Volum/EnhancingStudentLearningandRet/219137
- Arslan, R. Ş. and Şahin-Kızıl, A. (2010). How can the use of blog software facilitate the writing process of English language learners? *Computer Assisted Language Learning*, 23(3), 183-197.
- Barr, D., Leakey, J., & Ranchoux, A. (2005). Told like it is! An evaluation of an integrated oral development project. *Language Learning and Technology*, 9(3), 55-78.
- Bax, S. (2003). CALL - past, present, and future. *System*, 31, 13–28.
- Berge, Z. L. (1995). Facilitating computer conferencing: Recommendations from the field. *Educational Technology*, 35(1), 22-30.

- Blake, R. J. (2009). The use of technology for second language distance learning. *Modern Language Journal, 93*(s1), 822–835.
- Bliuc, A.-M., Goodyear, P., & Ellis, R. A. (2007). Research focus and methodological choices in studies into students' experiences of blended learning in higher education. *Internet and Higher Education, 10*(4), 231-244.
- Boyle, T., Bradley, C., Chalk, P., Jones, R., & Pickard, R. (2003). Using blended learning to improve student success rates in learning to program. *Journal of Educational Media, 28*(2/3), 165–178.
- Bransford, J. D., Brown, A. L. & Cocking, R. R. (1999). *How people learn: Brain, mind, experience, and school*. Washington, D.C. : National Academy Press.
- Cartner, H. (2009). Blended learning and the academic word lists. *New Zealand Studies in Applied Linguistics, 15*(2), 30-40.
- Chandra, V. & Fisher, D. L. (2009). Students' perceptions of a blended web-based learning environment. *Learning Environment Research, 12*, 31-44.
- Chang, V. & Fisher, D. (1999). Students' perceptions of the efficacy of Web-based learning environment: The emergence of a new learning instrument. Paper presented at the HERDSA Annual International Conference, Melbourne, July 1999. Retrieved from <http://www.herdsa.org.au/branches/vic/Cornerstones/pdf/Chang.PDF>
- Chang, V., & Fisher, D. (2003). The validation and application of a new learning environment instrument for online learning in higher education. In M. S. Khine & D. Fisher (Eds.),

- Technology-rich learning environments: A future perspective* (pp. 1-20). Singapore: World Scientific Publishing Co. Pte. Ltd.
- Chapelle, C. A. (2009). The relationship between second language acquisition theory and computer-assisted language learning. *Modern Language Journal*, 93(s1), 741–753.
- Chapelle, C.A., & Hegelheimer, V. (2004). The language teacher in the 21st century. In S. Fotos & C.M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp. 299–316). Mahwah, NJ: Lawrence Erlbaum Associates.
- Chenoweth, N. A., & Murday, K. (2003). Measuring student learning in an online French course. *CALICO Journal*, 20(2), 285-314.
- Chenoweth, N. A., Ushida, E., & Murday, K. (2006). Student learning in hybrid French and Spanish courses: An overview of language online. *CALICO Journal*, 24(1), 115-145.
- Cherryholmes, C. H. (1992, August-September). Notes on pragmatism and scientific realism. *Educational Researcher*, 13-17.
- Chickering, A. W. & Gamson, A. F. (1987). *Seven principles for good practice in undergraduate education*. Racine, WI: The Johnson Foundation, Inc. Wingspread.
- Chickering, A., & Ehrmann, S. C. (1996). Implementing the seven principles: Technology as lever. *AAHE Bulletin* (October), 3-6.
- Chun, D. (2008). Computer-mediated discourse in instructed environments. In S. Magnan (Ed.), *Mediating discourse online* (pp. 15–45). Philadelphia: Benjamins.
- Chute, A. G., David Williams, J. O. & Hancock, B. W. (2006). Transformation of sales skills through knowledge management and blended learning. In C. J. Bonk & C. R. Graham

- (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer.
- Collopy, R. & Arnold, J. (2009). To blend or not to blend: online and blended learning environments in undergraduate teacher education. *Issues in Teacher Education*, 18 (2), 85-101.
- Compton, L. K. L. (2009). Preparing language teachers to teach language online: a look at skills, roles, and responsibilities. *Computer Assisted Language Learning*, 22(1), 73-99.
- Coryell, J. E. & Chlup, D. T. (2007). Implementing e-learning components with adult English language learners: Vital factors and lessons learned. *Computer Assisted Language Learning*, 20(3), 263-278.
- Creswell (2009). *Research Design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles: Sage Publications.
- Crumpacker, N. (2001). Faculty pedagogical approach, skill, and motivation in today's distance education milieu. *Online Journal of Distance Learning Administration*, 4(4).
- Cummins, P.W., & Davesne, C. (2009). Using electronic portfolios for second language assessment. *Modern Language Journal*, 93(s1), 848-867.
- Davis, D., & Rose, R. (2007). Professional developments for virtual schooling and online learning. Retrieved from
http://www.inacol.org/research/docs/NACOL_PDforVSandOlnLrng.pdf

- Davis, H. C. & Fill, K. (2007). Embedding blended learning in a university's teaching culture: Experiences and reflections. *British Journal of Educational Technology*, 38(5), 817-828.
- Dennis, K., Bunkowski, L., & Eskey, M. (2007). The little engine that could--how to start the motor? Motivating the online student. *InSight: A Collection of Faculty Scholarship*, 2, 37-49.
- Ducate, L.C., & Lomicka, L. L. (2008). Adventures in the blogosphere: From blog readers to blog writers. *Computer Assisted Language Learning*, 21, 9–28.
- Dziuban, C., & Moskal, P. (2001). Evaluating distributed learning in metropolitan universities. *Metropolitan Universities*, 12(1), 41–49.
- Dziuban, C., Hartman, J., & Moskal, P. (2004, March 30). *Blended Learning*. EDUCAUSE Center for Applied Research bulletin. Retrieved from <http://net.educause.edu/ir/library/pdf/ERB0407.pdf>
- Dziuban, C., Hartman, J., Juge, F., Moskal, P. & Sorg, S. (2006). Blended learning enters the mainstream. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer.
- Echavez-Solano, N. (2003). *A comparison of student outcomes and attitudes in technology-enhanced vs. traditional second-semester Spanish language courses*. Unpublished doctoral dissertation, The University of Minnesota.

- Egbert, J., Huff, L., McNeil, L., Preuss, C., & Sellen, J. (2009). Pedagogy, process, and classroom context: Integrating teacher voice and experience into research on technology-enhanced language learning. *Modern Language Journal*, 93(s1), 754–768.
- Elola, I. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning & Technology*, 14(3), 51-71.
- Fellner, T., & Apple, M. (2006). Developing writing fluency and lexical complexity with blogs. *JALT CALL Journal*, 2(1), 15–26.
- Fry, R. (2009). College enrollment hits all-time high, fueled by community college surge. Retrieved from <http://pewsocialtrends.org/2009/10/29/college-enrollment-hits-all-time-high-fueled-by-community-college-surge/1/>
- Fulkerth, R. (2010). A case study from Golden Gate University: using course objectives to facilitate blended learning in shortened courses. *Journal of Asynchronous Learning Networks*, 13(1), 43-54.
- Garrett, N. (2009). Computer-assisted language learning trends and issues revisited: Integrating innovation. *Modern Language Journal*, 93(s1), 719–740.
- Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. San Francisco: Jossey-Bass.
- Garrison, D. R., Anderson, T. & Archer, W. (2000). Critical Inquiry in a text based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 1-19.

- Garrison, R. D. & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7, 95-105.
- Gorsky, P. & Blau, I. (2009). Online teaching effectiveness: A tale of two instructors. *International Review of Research in Open and Distance Learning*, 10(3), 1-27.
- Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer.
- Graham, C. R., Allen, S., & Ure, D. (2003). *Blended learning environments: A review of the research literature*. Unpublished manuscript, Provo, UT.
- Graham, C. R., Allen, S., & Ure, D. (2005). Benefits and challenges of blended learning environments. In M. Khosrow-Pour (Ed.), *Encyclopedia of Information Science and Technology* (pp. 253–259). Hershey, PA: Idea Group.
- Green, A., & Youngs, B. E. (2001). Using the web in elementary French and German courses: Quantitative and qualitative study results. *CALICO Journal*, 19(1), 89-123.
- Grgurović, M. (2010). *Technology-enhanced blended language learning in an ESL class: A description of a model and an application of the Diffusion of Innovations theory*. (Doctoral dissertation). Retrieved from ProQuest, UMI Dissertations Publishing. (AAT 3438697).
- Hampel, R., & Stickler, U. (2005). New skills for new classrooms: Training tutors to teach languages online. *Computer Assisted Language Learning*, 18(4), 311–326.

- Hegelheimer, V. (2006). Helping ESL writers through a multimodal, corpus-based online grammar resource. *CALICO Journal*, 24, 5–32.
- Hegelheimer, V., & Fisher, D. (2006). Grammar, writing & technology: A sample technology-supported approach to teaching grammar and improving writing for ESL learners. *CALICO Journal*, 23, 257–280.
- Hiltz, S. R., & Turoff, M. (2005). The digital society - education goes digital: The evolution of online learning and the revolution in higher education. *Communications of the ACM*, 48(10), 59.
- Ho, M.-C., & Savignon, S. J. (2007). Face-to-face and computer-mediated peer review in EFL writing. *CALICO Journal*, 24, 269–290.
- Hoffman, J. (2006). Why blended learning hasn't (yet) fulfilled its promises: Answers to those questions that keep you up at night. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer.
- Hong, K. H. & Samimy, K. K. (2010). The influence of L2 teachers' use of CALL modes on language learners' reactions to blended learning. *CALICO Journal*, 27(2), 328-248.
- Hubbard, P. & Levy, M. (2006a). *Teacher education in CALL*. Amsterdam: John Benjamins.
- Hubbard, P. & Levy, M. (2006b). The scope of CALL education. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 3-21). Amsterdam: John Benjamins.
- Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO Journal*, 25(2), 175-188.

- Hubbard, P. (Ed.) (2009). *Computer assisted language learning: Critical concepts in linguistics, Volumes I-IV*. London & New York: Routledge.
- Jegede, O., Fraser, B. & Fisher, D. (1998, April). *Development, validation and use of a learning environment instrument for university distance education settings*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Jones, C.M., & Youngs, B.L. (2006). Teacher preparation for online language instruction. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 267–282). Philadelphia: John Benjamins Publishing Company.
- Jones, C.M., & Youngs, B.L. (2006). Teacher preparation for online language instruction. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 267–282). Philadelphia: John Benjamins Publishing Company.
- Kaleta, R., Skibba, K., & Joosten, T. (2007). Discovering, designing, and delivering hybrid courses. In A. G. Picciano & C. Dziuban (Eds.), *Blended learning: Research perspectives* (pp. 111-144): The Sloan Consortium.
- Kerssen-Griep, J., Hess, J. A., & Trees, A. R. (2003). Sustaining the desire to learn: Dimensions of perceived instructional facework related to student involvement and motivation to learn. *Western Journal of Communication*, 67, 357-361.
- Lafford, B. A. (2009). Toward an ecological CALL: Update to Garrett (1991). *The Modern Language Journal*, 93(s1), 673-696.

- Laster, S., Otte, G., Picciano, A. G., & Sorg, S. (2005). *Redefining blended learning*. Paper presented at the Sloan-C workshop on blended learning, Chicago, IL.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Lei, J. (2010). Quantity versus quality: A new approach to examine the relationship between technology use and student outcomes. *British Journal of Educational Technology*, 41(3), 455-472.
- Levy, M. (2009). Technologies in use for second language learning. *Modern Language Journal*, 93(s1), 769–782.
- Lewis, N. J. & Orton, P. Z. (2006). Blended learning for business impact: IBM's case for learning success. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer.
- López-Pérez, M. V., Pérez-López, M. C. & Rodríguez-Ariza L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & Education*, 56(3), 818-826.
- Macedo-Rouet, M., Ney, M., Charles, S., & Lallich-Boidin, G. (2009). Students' performance and satisfaction with web vs. paper-based practice quizzes and lecture notes. *Computers & Education*, 53(2), 375-384.
- Mackey, A. & Gass, S. (2005). *Second language research: Methodology and design*. Mahwah, New Jersey: Lawrence Erlbaum Associates, p.125-126.

- Maor, D. & Fraser, B.J. (1996). Use of classroom environment perceptions in evaluating inquiry-based computer assisted learning. *International Journal of Science Education*, 18, 401–421.
- Masie, E. (2006). The blended learning imperative. In C. J. Bonk & C. R. Graham (Eds.), *Handbook of blended learning: Global perspectives, local designs* (pp. 22-26). San Francisco, CA: Pfeiffer.
- Massy, J. (2006). The integration of learning technologies into Europe's education and training system. In C. J. Bonk & C. R. Graham (Eds.), *Handbook of blended learning: Global perspectives, local designs* (pp. 419-431). San Francisco, CA: Pfeiffer.
- Miyazoe, T. & Anderson, T. (2010). Learning outcomes and students' perceptions of online writing: Simultaneous implementation of a forum, blog, and wiki in an EFL blended learning setting. *System*, 38, 185-199.
- Dougiamas, M. (2007). Moodle (Version 1.9) [Content Management System software]. Perth, Australia: Moodle.
- Moore, N. & Gilmartin, M. (2010). Teaching for better learning: A blended learning pilot project with first-year geography undergraduates. *Journal of Geography in Higher Education*, 34(3), 327-344.
- Morgan, D. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, 1(1), 48-76.

- Murray, L., & Hourigan, T. (2006). Using micropublishing to facilitate writing in the foreign language. In L. Ducate & N. Arnold (Eds.), *Calling on CALL: From theory and research to new directions in foreign language teaching* (pp. 149–180). CALICO Monograph Series Volume 5. Texas State University. San Marcos, TX: CALICO Publications.
- Neumeier, P. (2005). A closer look at blended learning: Parameters for designing a blended learning environment for language teaching and learning. *ReCALL* 17(2), 163–178.
- Oh, E., & Park, S. (2009). How are universities involved in blended instruction? *Educational Technology & Society*, 12(3), 327-342.
- Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. *Quarterly Review of Distance Education*, 4(3), 227-233.
- O'Toole, J. & Absalom, D. J. (2003). The impact of blended learning on student outcomes: Is there room on the horse for two?. *Journal of Educational Media*, 28(2), 179-190.
- Otto, S. E. K., & Pusack, J. P. (2009). Computer-assisted language learning authoring issues. *Modern Language Journal*, 93(s1), 784–801.
- Oxford, R., & Jung, S. (2007). National guidelines for technology integration in TESOL programs: Factors affecting (non)implementation. In M. Kassen, R. Lavine, K. Murphy-Judy, & M. Peters (Eds.), *Preparing and developing technology-proficient L2 teachers* (pp. 51-66). San Marcos, TX: CALICO.
- Palmer, J. C. (2011). *Annual grapevine compilation of state fiscal support for higher education: Results for fiscal year 2010-11*. Retrieved from

- http://www.centereducationpolicy.ilstu.edu/documents/Grapevine_Release_FY11_Jan18.pdf
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pease, P. S. (2006). Blended learning goes totally virtual by design: The case of a for-profit, online university. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global Perspectives, Local Designs* (pp. 3-21). San Francisco: Pfeiffer.
- Pennock-Speck, B. (2009). European convergence and the role of ICT in English studies at the Universitat de Valencia: Lessons learned and prospects for the future. *Linguistic insights - studies in language and communication*, 75, 169-185.
- Picciano, A. G. & Dziuban, C. (2007). *Blended learning: research perspectives*. Needham, Mass: The Sloan Consortium.
- Reinders, H. (2009). Technology and second language teacher education. In Burns, A. and Richards, J. (Eds.), *The Cambridge guide to language teacher education*. Cambridge: Cambridge University Press.
- Roschelle, J. M., Pea, R. D., Hoadley, C. M., Gordin, D. N. & Means. B. M. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of Children*, 10(2), 76-101.
- Ross, B., & Gage, K. (2006). Global perspectives on blended learning: Insight from WebCT and our customers in higher education. In C. J. Bonk & C. R. Graham (Eds.), *Hand-*

- book of blended learning: global perspectives, local designs* (pp. 155-168). San Francisco, CA: Pfeiffer.
- Rossmann, G. B. & Wilson, B. L. (1985, October). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation Review, 9*(5), 627-642.
- Sagarra, N. & Zapata, G. C. (2008). Blending classroom instruction with online homework: A study of student perceptions of computer-assisted L2 learning. *ReCALL, 20*(2), 208-224.
- Sanprasert, N. (2010). The application of a course management system to enhance autonomy in learning English as a foreign language. *System, 38*, 109-123.
- Schulze, M. & Liebscher, G. (2010). Going in cycles: Courseware and material development for written communication. *CALICO Journal, 27*(3), 554-563.
- Scida, E. E., & Saury, E. R. (2006). Hybrid courses and their impact on student and classroom performance: A case study at the University of Virginia. *CALICO Journal, 23*(3), 517-531.
- Seidel, T., & Shavelson, R. J. (2007). Teaching effectiveness research in the past decade: The role of theory and research design in disentangling meta-analysis results. *Review of Educational Research, 77*(4), 454-499.
- Shea, P. (2007). Towards a conceptual framework for learning in blended environments. In A. G. Picciano & C. D. Dziuban (Eds.), *Blended learning: Research perspectives* (pp. 19-36). Needham, MA: Sloan Consortium.

- Shea, P., Pickett, A. M., & Pelz, W. E. (2003). A follow-up investigation of teaching presence in the SUNY Learning Network. *Journal of the Asynchronous Learning Network, 7*(2).
- Shroff, R. H. & Vogel, D. R. (2010). An investigation on individual students' perceptions of interest utilizing a blended learning approach. *International Journal on E-Learning, 9*(2), 279-294.
- Singh, T. C. (2010). Creating opportunities for students in large cohorts to reflect in and on practice: Lessons learnt from a formative evaluation of students' experiences of a technology-enhanced blended learning design. *British Journal of Educational Technology, 41*(2), 271-286.
- Slaouti, D. and Motteram, G. (2006) Reconstructing practice: Language teacher education and ICT. In Hubbard, P. and Levy, M (eds.) *Teacher education in CALL*. John Benjamins Publishing Company.
- So, H. & Bonk, C. J. (2010). Examining the roles of blended learning approaches in computer-supported collaborative learning (CSCL) environments: A Delphi study. *Educational Technology & Society, 13*(3), 189-200.
- Stracke, E. (2007). A road to understanding: A qualitative study into why learners drop out of a blended language learning (BLL) environment. *ReCALL, 19*(1), 57-78.
- SurveyMonkey. <http://www.surveymonkey.com/>
- Teh, G. & Fraser, B.J. (1994). An evaluation of computer-assisted learning in terms of achievement, attitudes and classroom environment. *Evaluation and Research in Education, 8*, 147–161.

The Purdue Online Writing Lab: <http://owl.english.purdue.edu/>

Thorne K (2003). *Blended learning: How to integrate online and traditional learning.* London: Kogan Page.

Tobin, K. (1998). Qualitative perceptions of learning environments on the world wide web.

Learning Environments Research, 1, 139-162.

Woods, D. K. (2007). Transana (Version 2.20) [Software]. Available from
<http://www.transana.org/>

Vaughan, N. D. (2010). A blended community of inquiry approach: Linking student engagement and course redesign. *Internet and Higher Education, 13*, 60-65.

Vignare, K. (2007). Review of literature blended learning: Using ALN to change the classroom—will it work? In A. G. Picciano & C.D. Dziuban (Eds.), *Blended learning: Research perspectives* (pp. 37-63). Needham, MA: Sloan Consortium.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* Cambridge: Cambridge University Press.

Wiebe, G. & Kabata, K. (2010). Students' and instructors' attitudes toward the use of CALL in foreign language teaching and learning. *Computer Assisted Language Learning, 23*(3), 221-234.

Young, D. J. (2008). An empirical investigation of the effects of blended learning on student outcomes in a redesigned intensive Spanish course. *CALICO Journal, 26*(1), 160-181.

Ziob, L. & Mosher, B. (2006). Putting customers first at Microsoft: Blended learning capabilities with customer needs. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of*

blended learning: Global perspectives, local designs (pp. 3-21). San Francisco:
Pfeiffer.