

**BROWARD COMMUNITY COLLEGE
TEACHING/LEARNING COMMUNITY
CLASSROOM RESEARCH AWARD**

EVALUATION FORM

Please complete this form for the research project that you conducted for the T/LC award. This information will be reviewed in order to evaluate the effectiveness of your research. Your evaluation and supporting documentation will be posted on the T/LC Website. Use additional paper where necessary.

Note: Please submit this form and your supporting documentation within 30 days of the completion of your project to Staff Development via email or on a disk (in Word format). Send a hardcopy (and disk) of your project to the Staff Development Office, Downtown Center - Room 605.

Name: Dominique Charlotteaux Date: 5/24/04

Signature: _____

Research Title: How Blended Courses Impact Students' Academic Experiences and Meanings

Project Completion Date: April 29, 2004

1. State the problem/idea you researched/examined

During Term II 2003-04, I investigated how students' participation in two blended Introduction to Educational Technology (EME 2040) courses impacted on their interpretation of classroom experiences, level of engagement with learning, and academic performance. A blended course (also known as hybrid course) here refers to a course that combines traditional, face-to-face instruction (i.e., 60% of the time) with online instruction delivered via the WebCT e-learning platform (i.e., 40% of the time). One of my EME sections was offered during the day. It met on Monday and Wednesday mornings from 11:00 to 11:50 a.m. and on Friday mornings, students did not report to class and had online activities. My other EME section was an evening class. It met every other Monday evening from 6:00 to 8:50 p.m. and on Mondays when there were no face-to-face meetings, students had online activities.

In the past five years, U.S. institutions of higher learning have increased the number of online courses and variety of online course formats that they offer

(e.g., fully online courses, blended/hybrid courses, and web-enhanced courses). Broward Community College has followed the same trend. I personally have been teaching a fully online course at the college since the Summer semester of 2001-02 (i.e., EDG 2701, Teaching Diverse Populations), as well as three other courses in the blended format since the Spring semester of 2002-03 (i.e., EDF 1005, Introduction to Education; EME 2040, Introduction to Educational Technology; DEP 2004, Human Development).

After analyzing the literature on online instruction, I became interested in studying blended courses as the current research on their effectiveness is still in its infancy stage. What scant research has been conducted in this area indicates that students generally prefer the blended course format over that of web-enhanced or traditional classes (Fredericksen, Pickett, Shea, Pelz, & Swan, 2000; Black, 2001; Scott, 2001) and that students who enroll in blended courses tend to demonstrate slightly higher success rates than students enrolled in traditional, face-to-face courses (Hall, 1998; Drueke et al, 2001). Little is known, however, about the reasons why or particular ways in which blended instruction positively impacts on the educational process of students.

The goal of the study was threefold: 1) to allow me, as a practitioner, to gather rich details via an ethnographic and case-study approach about the particular dynamics that shape students' educational process in blended courses; 2) to increase my understanding of how to create optimal learning conditions in blended courses; 3) to broaden the knowledgebase in this particular area of instructional technology.

2. Provide a summary of the results of your research.

During Term II 2003-04, I conducted informal interviews with all students enrolled in my two EME 2040 hybrid courses (i.e., with 45 students). Out of 45 students, 23 were enrolled in my morning section and 22 were enrolled in my evening section. 33 of the study participants had never enrolled in a blended course previously. 12 students had previously taken a fully online or blended course. The remainder of this section will describe the findings that emerged from an analysis of the data collected.

The interviews established that participation in a blended course had a positive impact on how 76% of the study participants (i.e., 34 out of 45 students) interpreted their academic experiences, engaged with learning, and performed academically. 24% of the study participants (i.e., 11 out of 45) had different opinions about and/or experiences in blended courses. Among these, 4 students preferred traditional, face-to-face classes, 5 felt that blended courses were too demanding, and 2 did not have a preference.

Three themes emerged from the study, namely students' positive experiences in blended courses, students' explanations of their experiences in blended courses, and students' improved attitudes towards academic work in blended courses. The latter were found to increase students' motivation to apply themselves academically and to facilitate academic success among students.

Across interviews, the repetition of "I like it" and "it's the best kind of class" by 34 out of 45 study participants (i.e., 76%) discloses students' positive experiences in and feelings towards blended courses and their particular scheduling and structure. It also reveals students' rank-ordering of their academic experiences at the college. From the perspective of most study participants, blended courses are the optimal instructional delivery system available at BCC. They especially enjoy the fact that blended courses combine traditional, face-to-face meetings with online instruction and use a variety of teaching strategies, and thereby create a learning environment that is flexible and meaningful to students. The following statements illustrate this view among many students:

"I enjoy having the flexibility of the online course. I can work at home at any time I want. It gives me the opportunity to work at my own pace. I can skip ahead if I need to or work slower if I am having problems. "

"I like meeting twice a week and doing online activities on Friday. I like it that I get to see the teacher if I have questions and that I can do assignments online. It's the best way."

"It's different than just being in class. It's not the same old thing every class. It's the best type of class."

"I prefer the blended course because of the flexibility and it's fun. You're learning but it's fun. I look forward to going to class."

"I like it because it's interactive."

"During class, the teacher uses many teaching strategies. We have PowerPoint presentations, and demonstrations and hands-on activities with different computer programs. It's more than just lectures. If you're not just an auditory learner, this is good for you because you have visual aids and hands-on experiences, not just lectures. Outside of class, we have online activities. It's varied."

Some of the study participants (i.e., 24%) communicated a different view about blended courses. They either did not have a preference for any

particular course format, preferred traditional, face-to-face classes, or found the blended course format to be very demanding. The following are examples of what students stated:

"I like it about the same."

"It doesn't really matter what kind of class as long as you're paying attention and are ready from the get-go."

"Going to class and hearing everyone else's opinion, I kind of like that better because I learn more if I am there and I hear it."

"I'm used to more teacher-student interaction every class."

"It's difficult if you don't know how to manage your time. I'd rather take a traditional class. It's just that I will probably be more pressured to do my work on time if I had to turn in an actual paper in the classroom. I tend to procrastinate."

The interviews also indicated that 76% of the study participants (i.e., 34 out of 45 students) interpreted their experiences in blended courses as "interesting", "challenging", and "fun". They attributed this to the fact that blended courses actively engage students in their educational process, relate instruction to real-life situations, and promote independence and individual responsibility among students. They commented:

"In this class, we apply what we learn. You're not just sitting there listening to someone talk and talk. It's less lecture and more hands-on. It's interesting."

"You're learning by doing projects on the computer and it's related to your future career as a teacher. It's like a real-world project".

"You get to actually work with the programs. It's not just told to you."

"I think you are more involved because you have to do it."

"You have to set your schedule and discipline yourself. It's making me take responsibility for myself."

"It gives us a chance to depend on ourselves and not on the teacher and to figure it out by yourself. It's challenging."

24% of the study participants had a different interpretation of their experiences in a blended course. This is exemplified in:

"Sometimes it gets a little confusing when I have to do certain things and tasks by myself."

"It's really hard because I'm not too good with computers."

"It's kind of hard for me. I guess I prefer face-to-face and talking to the teacher and more one-on-one."

"It's hard. I like to get an immediate response if I'm having a problem."

"Sometimes I get a little laid back and forget to turn my work in on time."

"I'm a procrastinator. Not good in this class."

Participation in a blended course was found to benefit 76% of the study participants. Specifically, the meanings that these students developed from partaking in a blended course positively impacted on how they engaged with learning, applied themselves, and viewed the course requirements. Students' meanings subsequently acted as a catalyst for academic success in the course. In particular, students felt that the blended course format and instructional strategies used helped them to improve their motivation and desire to do well academically, namely to produce high quality work and to master the course content and skills:

"Because I'm more involved in it, that gives me more motivation to do my work better."

"I am definitely more motivated. It's more accommodating to my learning style."

"It has helped me learn by showing me different methods of accessing information."

"It makes me want to do more than is actually assigned. It makes me focus and be proud of the work itself instead of just focusing on the assignment for credit."

“When I have an activity or a project I am really into detail and it has to be perfect. It’s organized and structured. I have the freedom to be creative.”

“There’s things we go over in class and when I get home and I’ll be all by myself, it’s like I forget how to do it and I end up doing a lot of research and just more expanding to find out how to do things.”

“The quality of my work has actually gone up a lot because it’s making me try a lot harder because I have a lot of fun in this class. It’s technology and I like technology.”

“I am applying myself more because I am going to need it in the future with my career and it’s fun to try and do yourself. By actually doing it yourself you get to see what you are doing wrong and you have to figure it out.”

“I think I am more organized and harder on myself to get things done.”

“It makes you be on top of things .”

“I don’t have the allowance of procrastinating.”

24% of the study participants did not harbour this belief:

“I work just as hard in any class.”

I have put just as much into this class as any other class I take.”

“I’m better off in a face-to-face class. When I’m doing an online project, it’s not harder to do things on the computer but you want to get it right and sometimes it does not do what you want.”

“It has not influenced the quality of my work, just forced me to be more diligent in studying.”

“I don’t think that it has influenced my work. I’m a mature student so I look at things a bit different than the kids do.”

A comparison of the rates of achievement in both EME classes showed that 73.33% of the study participants obtained a B or higher in the course (i.e., 53.33% received a B and 20% received an A). 22.22% of the students received a C and 4.44% received an F.

The interviews also indicated that 69% of the study participants (i.e., 31 out of 45 students) were able to transfer the skills that they learned in the course to other classes and to apply these skills in various academic tasks. The following are examples of students' statements:

"I learned to use PowerPoint in this class. I did a project for another course and I did it on PowerPoint. It was organized and it looked presentable. I am using this in English class and others."

"Being more familiar with the programs such as Microsoft Word and being able to type documents on Publisher and PowerPoint has been helpful in other classes."

"My philosophy class has tests and stuff online. Now I know how to get to webct and the tests and stuff like that."

"It helps me tremendously because now I can go to various websites and do research, and get information to do other projects."

"I have an art class. I can go online and see the different art galleries and different museums online and view and study some pictures that might be on my exam."

"I have some knowledge on how to use the computer and write papers. I know more tricks."

31% of the study participants, however, were enrolled in classes where technology was not incorporated into teaching and/or students were not required to use technology to complete their class assignments:

"Right now I'm only taking two courses. One of them does not require computer work."

"I'm only really taking a math class and this class. We don't have to use computers in math class."

"I haven't been using computers in other classes."

"My classes don't require computer work."

"It doesn't help with other classes because we don't use computers."

"I don't have to use a computer in my other classes."

With regard to their future career as teachers, 93% of the study participants (i.e., 42 out of 45) are convinced that their experiences in a blended educational technology course will prove helpful when they teach. They stated:

"This definitely lets me know that sitting there and talking to students over and over is not helpful but if I give them hands-on experiences and if I let them find their own way of how to do things and think, they will learn more that way."

"This class will help me maintain my organizational skills and to use a lot of programs in the classroom."

"I have a lot of resources and things to go to when I become a teacher."

"When I am a teacher, everything is going to be computer-based so I can help my kids learn."

"It's shown me how to keep a child's attention and make it interesting. It spices up a child's imagination because of the visual effects and sounds."

"It will help me to integrate technology into the classroom."

"It's helping me with my career. I think it will help me because now I know how to make my own webpage and I know like how to use search engines and how to make daily tasks."

Three of the study participants (i.e., 7%) were skeptical. This is captured in:

"I don't know. Everything now is computers. I don't see nothing wrong with teaching the traditional way."

"I think that teaching the way I was taught without computers is more meaningful because you're hearing it."

3. Please describe the methods you used to evaluate the effectiveness of your project. Include any quantitative and/or qualitative supporting data.

The quality of any research design is judged according to certain logical tests. Among these, the test of construct validity is concerned with the authenticity of the representations made (Bogdan & Biklen, 1992; Yin, 1989, 1994). The construct validity of this study was strengthened through the use

of multiple sources of evidence. The data was collected in two research sites (i.e., two different EME 2040 classes), from two different categories of students (i.e., day and evening students), via two main methods of data collection (i.e., informal interviews and observations).

The quality of a research design is also judged by its internal validity, namely whether the causal relationships established in the data are in fact accurate. By identifying the salient themes, patterns, and counter-examples in the data, and by revising my explanation about the impact of hybrid courses until all exceptions in the data were accounted for, I increased the likelihood that my final explanation was correct. This served to increase the overall validity of the study (Yin, 1989, 1994).

On yet another level, the quality of a research design is also judged according to its external validity, namely whether the findings are generalizable beyond the immediate case study (Yin, 1989, 1994). From the perspective of quantitative researchers, qualitative small-scale case studies have low external validity since they are not representative. Qualitative researchers, however, argue that contrary to quantitative research, which generalizes from a sample to a larger population, qualitative small-scale case studies are generalizable to theory through replication of the findings in new cases (Yin, 1989, 1994). In this study, external validity or the generalizability of the findings to a theoretical framework was heightened by the use of a multiple-case study that confirmed the results predicted prior to research (i.e., a theoretical replication). The study showed that the impact exerted by hybrid courses on students' academic experiences and meanings was positive. Furthermore, external validity was also strengthened by the fact that I revised my explanation about hybrid courses until all the exceptions in the data were accounted for.

In yet another respect, the quality of a research design is also judged by its reliability (Bogdan & Biklen, 1992; Yin, 1989, 1994). The reliability of the study, or the replication of the same procedures and findings by another researcher, was strengthened through my thorough documentation of the data collection methods, the evidence gathered, and procedures for data analysis (i.e., the maintenance of a chain of evidence). In addition, reliability was strengthened by the fact that I checked my interpretations against the meanings of participants to assess how much congruence there was.

4. If applicable, identify what prevented you from achieving maximum results.

The limitation of this study lies in the fact that I did not examine the impact of personal values, such as attitudes toward the use of technology in

education and expectations of achievement, on the study participants' meanings and experiences in blended courses. It should however be noted that a number of questions that were asked during interviews not only gave the study participants the opportunity to corroborate or deny such an impact, but also to comment about the impact of other variables, including personal values. The second limitation of this study stems from the fact that, due to time constraints imposed by the college, the data collection phase of this study was limited to a four-month period (i.e., from January to April 2004). Had I been able to collect data longitudinally over an entire academic year, the results may have been different.

5. Please attach copies of any evaluation forms (or a summary of those forms) that you used.

In accordance with the tradition of qualitative research, my data collection methods were based on informal tape-recorded interviews of the study participants. The following will describe the methods that I used to evaluate the effectiveness of my project.

After transcribing and typing all interviews and organizing the latter into two separate case study folders, I examined the data collected from each course, coded the data into broad categories (e.g., learning environment, educational experiences, and students' meanings), identified the salient themes and patterns across the data, and developed a rough explanation about the impact of blended courses. As data collection proceeded, I continued to look for new patterns in the data that supported my explanation, as well as for counterexamples that did not and revised my explanation until all the exceptions in the data were accounted for. After the data collection phase was completed, I also analyzed the evidence obtained by comparing the patterns in the data to the results that I predicted prior to research, and subsequently derived conclusions. I further compared the rates of achievement in both classes, as well as the work quality of students (i.e., as evidenced through a PowerPoint group presentation and an electronic portfolio of class projects). The above methods were used to increase the validity and reliability of the study.

6. Specifically, how do you intend to share the results of your classroom research with the BCC community?

I will distribute a written report of my research findings to other education instructors at South Campus at the beginning of Term I 2004-05 and present the results of my research at the annual South Campus Technology Mentor Fair during Term II 2004-05. In addition, if instructors from other South

Campus departments are interested, I will offer a workshop on “Blended Courses”.

7. In what ways might faculty from other disciplines apply your research?

Faculty who are in the process of developing a course with a WebCT component may reflect on the merits of teaching the course in the blended format and of implementing elements of the blended course that students seem to enjoy (e.g., flexible learning, hands-on activities, and online components) and which appear to enhance student’s learning and promote their academic success.

8. Other comments about your research that you wish to discuss with the T/LC or ideas for future follow-up studies in your discipline or other disciplines.

I enjoyed the opportunity to engage in action research in two of my classes. This experience allowed me to gather some information about the particular dynamics that shape students’ educational process in blended courses. It also allowed me to increase my understanding of how to design a blended course that promotes success among students. I would like to thank the T/LC Committee for giving me the opportunity to study my own educational practice.

More research, however, needs to be conducted along a continuum of different online course formats in more classes and disciplines, as well as across the themes that emerged from my research in two educational technology classes. This will not only serve to validate the findings from the present study, but also help to develop a theory of academic performance in online courses, as well as strategies for creating optimal learning conditions in online courses. I personally would be interested in conducting further research in this area during a sabbatical and writing up the results in a publishable article.

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