



**HOLCOMBE INSTITUTE FOR TEACHING & LEARNING EXCELLENCE
CLASSROOM RESEARCH AWARD EVALUATION**

Human Resources – Holcombe Institute • 225 East Las Olas Boulevard • Fort Lauderdale, Florida 33301 • 954-201-7339

Please complete this form for the research project that you conducted for the Classroom Research 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 HI Website. Use additional paper where necessary.

Note: Please submit this form and supporting documentation within 30 days of the completion of your project to Office of Professional Development & Training, B31 - R605, WHC. In addition, you will need to attach an electronic copy of the evaluation to an EMAIL and forward to ProfDevTrng@broward.edu.

MUST BE WORD PROCESSED

Name:	Dominique Charlotteaux Mary O. Smith	Date:	May 20, 2009
Signature:			
Title of Research Project:	The Impact of Learning Studios on Teaching Style and Student Engagement		
Project Completion Date:	May 20, 2009		

1. State the problem to be researched.

This study examined how the South campus learning studios impact instructors' pedagogical approach and students' level of engagement with learning in comparison to traditional classrooms. A learning studio was here defined as a technology-rich classroom typically comprised of a teacher's computer station, projection system, plasma screens, smart board, wireless laptops, and furniture on wheels that allow instructors and students to access technology and reconfigure the physical layout of the classroom in accordance with teaching and learning needs. A traditional classroom, on the other hand, was referred to as a learning environment that includes a teacher's computer station, projection system, and fixed furniture.

It was hypothesized that, compared to traditional classrooms, learning studios would support a more interactive and constructivist approach to teaching among instructors (i.e., instructors would design classroom activities that promote active learning by "doing"), as well as a greater degree of student engagement with learning.

Many of today's community college students share the following characteristics: they are under the age of 26 (a generation referred to as "millennium students"), come from culturally diverse backgrounds, and enroll in college classes on a part-time basis while working and juggling family responsibilities (Oblinger, 2003; Community College Survey of Student Engagement, 2007; Garcia, Lopez, & Herman Miller, 2008). A disproportionate number of these students are also not prepared for college level work and have to take developmental education courses and/or simply do not experience meaningful and engaging classroom experiences that promote their academic success. This places many students at risk for dropping out of college and not achieving their professional goals (Bailey & Smith Morest, 2006; Community College Survey of Student Engagement, 2007; Garcia, Lopez, & Herman Miller, 2008; Zeidenberg, 2008).

In recent years, a growing body of research has linked academic failure among today's community college students to classroom practices that clash with the learning styles, values, and expectations of students. While in daily life, millennium students are used to multi-tasking, connecting with others via cell phones and computer technologies, taking in information visually, many find it difficult to apply themselves and invest time and effort in college classes where teachers primarily teach via lectures and do not actively engage students in group work, real-life applications, and activities that infuse technology (Oblinger, 2003; Garcia, Lopez, & Herman Miller, 2008; Tinto, 2008).

In the past decade, a few community colleges, including Eastfield College (Texas) and Estrella Mountain Community College (Arizona) have attempted to tackle this problem by redesigning their classroom spaces and implementing learning studios (Garcia, Lopez, & Herman Miller, 2008). A learning studio is an electronic classroom with furniture on wheels that can be easily rearranged according to classroom needs and activities and provides immediate access to technology. What scant research has been conducted to date indicates that learning studios promote active learning and student engagement and subsequently support academic success. Little is known, however, about the particular learning studio dynamics that positively impact instructors' teaching methods and students' engagement with learning.

At Broward College South Campus, eight learning studios were implemented during academic year 2007-2008. Until now, no data has been collected to assess how such initiative impacts instructors and students. Research in this area is therefore urgently needed to describe and explain the effects of learning studios on the way that teachers teach and students engage in learning.

2. Summarize the research findings/results. If applicable, attach copies of evaluation forms and a summary of those forms.

Two classes of 25 students who were enrolled in REA 0006C College Prep Reading and two classes of 16 and 17 students enrolled in EDG 2701 Introduction to Diversity and Exceptionalities during Term II, 2008-2009 were the subjects of this study. Both reading classes were taught by one instructor and both education courses were taught by one instructor. Both reading classes were taught in a learning studio classroom. In the education classes, one class was taught in a traditional classroom, and the other class in a learning studio. In both cases, one class was taught using a traditional lecture style format with minimal technology utilized in the classroom. The other class was taught using the technology tools available in the learning studio classroom with both students and instructor having access to the technology in the learning process. Students gave presentations and presented group projects using this technology. At the end of the term a questionnaire was completed by both groups of students and the instructors as to what impact the teaching style had on the learning environment and the students' engagement with the instructor and their peers

The following is a summary of how the students responded to the questions in the questionnaire and conclusions that can be drawn from their answers. For the purpose of the study, one class will be identified as a traditional class and the other as the technology enhanced class.

Conclusions

It is clear from the student and instructor responses to the questionnaire, that when technology is available in a learning studio, that the instructor and students will use it more frequently. In the reading classes, technology was used almost twice as much in the technology enhanced classes as compared to the traditional classroom. There is a pattern of similar use of lectures and discussions in both classrooms, but in the learning studio classroom, there is more independent study and discovery, as well as more group projects and student presentations. This increase in instructor's technological usage translates to increased student's usage of technology to interact with each other as well. In the learning studio classroom, the students stated that they interacted with each other more frequently than

students in the traditional classroom, and the way they interacted was through technology. Students interacted with each other primarily via the internet on a weekly, or in the case of the reading students, two or three times weekly. Students also utilized the internet, and in the case of the education class, the online discussion board, or the telephone. In the traditional reading class none of the students responded that they interacted with their peers via the internet, whereas in the learning studio, that was the preferred method of interaction. The use of technology does not replace face-to-face interaction among students, since all groups responded almost equally that they interacted before and after class as well. As far as interaction with the instructor, the traditional class did not communicate with the instructor as much as the learning studio class, but when they did, it was more usually via the traditional face-to-face interaction before and after class. These students did correspond via email with the instructor, but not as frequently as the learning studio class. Both groups reported nearly the same amount of interaction before and after class. A conclusion to be drawn from this is that interaction increases both between students and between students and instructors when technology is used in the classroom.

As far as learning modalities, students reported about the same split in learning styles. Students in the learning studios expressed appreciation for the setup of the classroom with the tables and open seating which they found conducive to group discussions and peer interaction. A good student quote is, "It affects the way you think and perform." Several students said they would prefer more hands on learning and most were knowledgeable of the teaching style used in the classroom. Students were also asked which learning experience was most helpful to them in the classroom environment. There were many individual responses, but in the traditional classroom the favored response was that they enjoyed group discussions and the interaction that goes along with that type of activity. In the learning studio the class seemed to find the group projects using technology the most helpful and enjoyable. They appreciated the PowerPoint presentations and being able to see and ask questions and have links to videos.

As far as the improvements that could be made to the classroom environment and teaching approach, the traditional class requested, "More computer time, visuals and auditory materials and technology., and a nicer classroom by education students taught in the traditional classroom." The learning studio class did not suggest any improvements except, "more time to work on group projects in class." A final observation derived from the responses of both groups is that the learning studio class was more likely to respond to open-ended questions and give opinions in this questionnaire. This may be an effect of the impact of different varieties of teaching styles on student engagement. Students seemed to feel more comfortable interacting with the instructor and expressing their opinions.

In conclusion, multiple teaching styles, classroom environment and technology do affect teaching style and student engagement. By comparing and contrasting the responses of these classes, it can be seen that students interact with each other and with their instructor more frequently when multiple teaching styles and learning strategies are used. A welcoming classroom environment and technology usage also enhance their learning experience. Students use technology to connect with each other and their instructor more frequently and they are more comfortable interacting with each other in the learning studio model and are more likely to ask for help from their peers. They are more engaged in the learning process and more connected with their fellow classmates and instructor.

Instructor responses to the questionnaire mirrored the students' responses. In a traditional classroom there was less communication between students and instructors, usually once a week via email. In a learning studio, instructors and students interacted more frequently using virtual office hours in the education class, and Internet and email in both classrooms. Instructors in the traditional classroom used the lecture format 80% of the time and classroom discussion and limited group projects. In the learning studio, the lecture time decreased dramatically and technology enhancement was the typical

format. Some suggestions from the instructors were to add more of this technology to all classrooms and to have additional training in using the technology

3. Describe the methods you used to evaluate the effectiveness of your project. Include quantitative and/or qualitative evidence.

From beginning to end of study, the data collected was analyzed in accordance with the traditions of qualitative research.

- 1) The data collected from each of the 4 classes was organized into 4 separate case studies
- 2) Data from each class/case study was coded into broad categories
- 3) The salient themes and patterns across the data for each class/case study were identified
- 4) Patterns in the data were compared across classes/case studies
- 5) Patterns in the data across classes/case studies were compared to the results predicted prior to research
- 6) Conclusions were derived explaining the impact of learning studios on teaching style and student engagement

5. If applicable, identify what prevented you from achieving your original, expected findings.

N/A

6. Explain in detail how you intend to share the results of this research with the Broward College community.

A presentation, or workshop, or panel discussion is planned for Professional Development Day. The evaluation will be posted on the Holcombe Institute, Classroom Research Award website.

7. Describe ways in which faculty from other disciplines could apply your research and its results in classroom practices, in future studies, and/or for student success?

This study supports the need for more learning studios to enhance student and instructor engagement and the need for training to help faculty to use a wide use of technology in these classrooms.

Submit this evaluation via EMAIL to ProfDevTrng@broward.edu
AND

Send the ORIGINAL (HARD COPY with signatures) to

**Holcombe Institute for Teaching & Learning Excellence: HR - Office of Professional
Development & Training - Bldg. 31/605 WHC - Phone 954-201-7339**