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THE COFFEE HOUSE CLASSROOM: THE DIFFERENCE BETWEEN STUDENT AND FACULTY PERCEPTIONS OF CLASSROOM SPATIAL DESIGN IN A COMMUNITY COLLEGE ENVIRONMENT

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ABSTRACT

With the ever increasing need for employees who are capable of problem solving, working in team-based projects, and engaging in professional discourse, it is questionable whether these activities are, or can be, supported and promoted in the typical community college classroom environment containing traditional rows of desks and computers with a professor front and center. These traditional classroom arrangements discourage participatory activities and engagements with peers and faculty due to the very nature of the inflexible and impersonal alignment of side-by-side, row seating.

This study investigated the impact of the physical furnishings and the spatial arrangement of a classroom environment on its occupants’ perceptions and behaviors. Traditional computer classroom settings were compared to a created coffee house style classroom containing a circular seating layout, a variety of seating options, and a mobile instructor’s station to determine if the difference in furnishings and spatial configuration would produce differing perceptions of a similar academic experience. An examination of the elements of environmental psychology and design provided a background for this study and a foundation for determining the significance and influence of the physical setting in relationship to occupant behavior.

This study utilized a quantitative survey instrument supplemented with a qualitative faculty interview and a classroom observation design to investigate the students’ and faculty’s perception of English Composition courses held in two different
classroom settings. Three ENG111 classes were held solely in a traditional computer classroom, three ENG111 classes spent one-half of the class sessions in a traditional computer classroom, for labs, and one-half of the sessions in the coffee house style classroom for discussion and critique.

The findings of this study suggests that those students in the classes held in the combination of settings incorporating both the traditional computer classroom and the coffee house classroom had a significantly higher incidence of satisfaction in two items of a seven-item instrument in the areas of *Personalization*, $X^2(2, N = 60) = 3.31, p = 0.025$, and *Task*, $X^2(2, N = 60) = 3.01, p = 0.037$, than those students who had classes meeting only in the traditional computer classroom. There was only a slightly significant student perception difference in the area of *Cohesiveness*, $X^2(2, N = 60) = 2.36, p = 0.058$, in favor of the courses held solely in the traditional computer classrooms. The faculty member teaching all six ENG111 courses reported a high degree of satisfaction with the coffee house classroom environment arrangement and results.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>2</td>
</tr>
<tr>
<td>Purpose of Study</td>
<td>3</td>
</tr>
<tr>
<td>Research Questions</td>
<td>4</td>
</tr>
<tr>
<td>Assumptions</td>
<td>5</td>
</tr>
<tr>
<td>Literature Review</td>
<td>6</td>
</tr>
<tr>
<td>Context of the Question</td>
<td>6</td>
</tr>
<tr>
<td>Faculty and Student Interaction and Engaged Learning</td>
<td>7</td>
</tr>
<tr>
<td>Environmental Psychology and Space Planning</td>
<td>14</td>
</tr>
<tr>
<td>Group Discussion Theories</td>
<td>23</td>
</tr>
<tr>
<td>The Coffee House Concept</td>
<td>24</td>
</tr>
<tr>
<td>Furnishings and Equipment in the Engaged Classroom</td>
<td>25</td>
</tr>
<tr>
<td>Variable Relationships</td>
<td>27</td>
</tr>
<tr>
<td>Review of Relevant Research on Methods and Procedures</td>
<td>31</td>
</tr>
<tr>
<td>Study Design &amp; Methodology</td>
<td>32</td>
</tr>
</tbody>
</table>
Quantitative Design ..................................................................................................................33
Site Selection ..........................................................................................................................34
Sample......................................................................................................................................34
Instrumentation .......................................................................................................................36
Dependent Variables ................................................................................................................37
Independent Variables: Gender and Age/Generation ............................................................37
Procedures ...............................................................................................................................38
Data Analyses ..........................................................................................................................43
Qualitative Design ..................................................................................................................43
Sample......................................................................................................................................44
Interview Method ....................................................................................................................45
Procedures ...............................................................................................................................46
Data Analyses ..........................................................................................................................46
Results ......................................................................................................................................47
Quantitative Results ................................................................................................................47
Demographic Variables with the Relationship of Experimental Conditions.........................49
Relationship with the Classroom Environment ......................................................................52
Coffee House & Traditional Classroom Comparisons .........................................................54
Qualitative Results ..................................................................................................................55
Discussion, Implications, Limitations, and Recommendations .............................................64
Discussion ...............................................................................................................................64
Implications .............................................................................................................................67
Study Limitations ...................................................................................................................68
Recommendations

References

APPENDIX A: PHOTOS OF COFFEE HOUSE AND TRADITIONAL CLASSROOMS

APPENDIX B: THE COFFEE HOUSE CLASSROOM DESIGN

APPENDIX C: CONSENT TO PARTICIPATE IN RESEARCH

APPENDIX D: “THE FACULTY EXPERIENCE” INTERVIEW

APPENDIX E: THE FACULTY INTERVIEW

APPENDIX F: ENG111 COMPLETION DATA

APPENDIX G: CUCEI RESULTS

APPENDIX H: “COFFEE HOUSE” EMAIL CORRESPONDENCE
LIST OF TABLES

Table 1 Age Variable ..............................................................................................................49
Table 2 Gender Variable ........................................................................................................50
Table 3 Age and Gender Variables in Combination .................................................................51
Table 4 Gender Differences between the Control and Coffee House Classrooms ..........52
Table 5 Age Differences between the Control and Coffee House Classrooms ...............53
Table 6 Age and Gender Differences between the Control and Coffee House Classrooms .................................................................................................................................55
Table 7 CUCEI Results between the Control and Coffee House Classrooms ..............94
LIST OF FIGURES

Figure 1. The Experiential Learning Model (Svnicki, 1998) ......................................................14
Figure 2. Abraham Maslow’s Hierarchy of Needs (Stewart-Pollack & Menconi, 2005) ..................15
Figure 3. Hall’s Personal Distances (1966). .................................................................................19
Figure 4. Conversation Arrangements and Distance ..................................................................22
Figure 5. ENG111-01, coffee house, taken on 02/18/08, photo one ...........................................58
Figure 6. ENG111-01, coffee house, taken on 02/18/08, photo two ............................................59
Figure 7. COM101-0, coffee house, taken on 02/18/08, photo one ..............................................59
Figure 8. COM101-01, coffee house, taken on 02/18/08, photo two ...........................................60
Figure 9. ENG111-19 taken on 02/18/08, photo one ...............................................................60
Figure 10. ENG111-19 taken on 02/18/08, photo two .............................................................61
Figure 11. ENG111-04 taken on 02/19/08, photo one .............................................................61
Figure 12. ENG111-04 taken on 02/19/08, photo two .............................................................62
Figure 13. ENG111-26 taken on 04/24/08, photo one .............................................................62
Figure 14. Coffee House Classroom North View ..........................................................................81
Figure 15. Coffee House Classroom East View ..........................................................................81
Figure 16. Coffee House Classroom- South View .......................................................................82
Figure 17. Coffee House Classroom- West View .......................................................................82
Figure 18. Traditional Classroom A ............................................................................................83
Figure 19. Traditional Classroom B ............................................................................................83
Figure 20. Team Problem Solving and Brainstorming Setting.............................................84
CHAPTER 1

Introduction

Many of the traditional classrooms found in today’s higher education institutions have their design roots in the factory assembly line. The faculty member is a supervisor of students, ensuring that each individual student shows up on time and is able to meet a quota of correct exam answers at the end of a class session. This model facilitates the mass delivery of information through the utilization of straight line seating; tables and chairs in row after row; the perfect arrangement to keep eyes straight ahead, focused on the “sage on the stage” (King, 1993, p. 30). There is little need for student conversation or participation due to the nature of the lecture system. The physical arrangement in these traditional classrooms does not easily facilitate student interactions, student team work, spontaneity, or brainstorming due to the restrictions of the built environment; furniture in a traditional classroom is heavy and static, unable to support comfortable group discussion.

As the information age replaces the manufacturing age (Cornell, 2002) the workforce will require knowledgeable workers who are responsible for more than assembly-line production. Most industries today need employees who can communicate well, think globally, and collaborate with people from diverse backgrounds (Colin, 2003). Employers recognize that these interpersonal skills are just as important as technical
skills (Datz, 2004). Recognizing the value of interpersonal skills makes how students are taught as important as what students are taught. Learning becomes a social occurrence; one’s ability to learn is dependent upon the quality and responsiveness of one’s relationships with others (Marquardt, 1996). Environments that center on the student through activities and projects that focus on collaboration and experiential learning stand in opposition to teacher-centered instruction designed around the interests and teaching styles of the faculty. In a learner-centered environment, student needs and learning styles drive the educational process (Gonzales & Nelson, 2005).

The higher education system needs to prepare students to adapt and succeed in this ever-changing workforce. Cornell and Luchetti (2004) suggest that a new learning environment must be created that allows and supports creative, spontaneous, and serendipitous moments, real world problems that exist across disciplines, exposure to new and varying points of view, and differences in individual and generational learning styles. The learning environment must also support all stakeholders in the learning community including faculty, student, administration, and business professionals.

Statement of Problem

Classroom design becomes particularly critical in the community college environment. According to the American Association of Community Colleges (2006), community colleges are the fastest growing segment of the American higher education system, growing in number from 100 to 1200 in the last 50 years. There is a significant number of non-traditional students enrolled in community colleges and many of these students have non-college commitments that do not allow the time necessary to participate in campus extracurricular activities. Currently 62% of the community college
student body is enrolled part time, 80% work full or part-time (averaging 32 work hours per week). The average student is 29 years old, 61% are financially independent, 33% are married with children, and 25% are single parents (American Association of Community Colleges). Approximately 46% of the student body are first-generation students and of these almost 70% are women employed full-time supporting dependents living at home and attending college part time (Nomie, 2005). Due to family and work commitments community college students are less likely than students enrolled in four-year institutions to participate in study groups, to speak with faculty outside of class, and to participate in school clubs (American Association of Community Colleges; Institution of Education Sciences, 2006). Social networking and interactions with faculty and peers is thus limited to the time spent in the classroom. If the classroom does not support and promote faculty and student interaction it may be impossible for the non-traditional student to develop a sense of belonging, develop the relationships necessary to feel a part of a learning community, or develop the collaborative learning skills necessary for the workplace (Tinto, 1997).

Purpose of Study

This study investigated the impact of a non-traditional classroom setting on faculty and student interactions. The design of this non-traditional classroom was inspired by the image of the coffee house: a place designed with the purpose and intent for interaction and discussion, quiet contemplation, or a meeting of the minds. This coffee house concept classroom incorporated the interior elements and principles of spatial design and furniture selection that support interaction and engagement and the principles behind successful group dynamics within the classroom environment.
This quantitative study with an interview-supplemented design and observation attempted to determine if the coffee house concept classroom supported and positively increased faculty-to-student, student-to-faculty, and student-to-student interaction, discussion, and engaged learning.

*Research Questions*

The research questions probed how the coffee house concept classroom’s spatial design and layout impacted the perceived faculty-to-student, student-to-faculty, and student-to-student interactions within the community college environment. This study also investigated whether age or generational cohort influenced the student or faculty responses.

*First research question.* Are there differences in perception of the classroom environment between students who experience a traditional class setting and those who experience the class in a coffee house classroom setting?

*Second research question.* Are there differences in perception of the classroom environment between male students who experience a coffee house classroom from female students?

*Third research question.* Are there differences among students in particular generational cohorts (i.e., born between 1922-1943; born between 1943-1960; born between 1960-1980; born after 1980) in their perceptions of a coffee house classroom environment?

*Fourth research question.* How does the faculty member describe his experiences teaching and in-class observations in a coffee-house environment as contrasted with teaching and in-class observations in a traditional classroom setting?
Assumptions

The assumptions that guide this research fall within three general areas. First, learner-centered “coffee house” concept classrooms promote a different collaborative learning and interaction environment than teacher-centered, traditional classrooms due to the spatial configuration designed for flexibility and ease of conversation. Second, this difference in faculty/student quality and/or quantity interaction affects how students achieve a grasp of the course information and develop a sense of community within the classroom. Third, students who experience a sense of belonging in their educational environment will be more likely to continue the pursuit of their academic goals (Kuh, Kinzie, Schuh, & Whitt, 2005). No assumption is being made about how the environment will affect these interactions.
CHAPTER 2

Literature Review

Context of the Question

There is a plethora of literature on the topics of state-of-the-art classroom design and technology integration, environmental factors affecting classroom environments, and ergonomic and efficiency factors involving a variety of classroom tasks, including computing and seating requirements. There are volumes of research pointing out the likelihood of greater learning taking place when interaction and engagement among faculty, students, and peers increases within the classroom. There are significant empirical and qualitative research studies as well as texts, articles, and other published materials on classroom design of K-12 environments. There is less research on the actual physical arrangement and layout of the classroom and the impact of the design on faculty and students’ ability to interact and communicate. The research becomes even sparser for the college and university learning environments arena, particularly in the community college environment.

For the purpose of this study, this literature review is divided into five sections. Section one discusses the theories of faculty and student interaction and engaged learning upon student success. Section two explores the issues of environmental psychology and space planning of the physical classroom environment including Maslow’s (1968)
“Hierarchy of Needs,” Hall’s (1966) science of proxemics, the principles behind group discussion and dynamics, and the concepts behind the coffee house design success (Michelli, 2007). Section three investigates the development of a learner-centered classroom through furnishings and equipment that support collaboration and social integration. Section four reveals the connectivity of the variable relationships of age and generational cohort to the study. And lastly, section five reviews the relevant research on methods and procedures.

The major databases utilized were PROQuest and the National Clearing House for Educational Facilities (NCEF, 2006a-d) websites which provided an extensive list of the research on educational facility design. The NCEF’s resource lists links, books, and journal articles on the design and planning of classrooms for early childhood centers, K-12 school buildings, and college and universities. Several key words were used when searching the topic including: “environmental psychology,” “classroom design,” “learning environments,” “ergonomics,” “interior” and “design,” and “community college.”

Facility and Student Interaction and Engaged Learning

Barr and Tagg (1997) argued that there must be a paradigm shift in the higher education classroom from one of instruction to one of learning. In a learning-centered environment the faculty are in charge of designing a curriculum that is based on what students need to know to function in their chosen fields, rather than what the faculty member chooses to teach. This argument became the impetus for the concepts of the learning college, the learning community, learning outcomes, and teachers as learning facilitators. Miller (2006) found that one of the reasons behind the ineffective nature of
formal learning, listening, note taking, reading, and exams can be traced to the actual classroom setting of traditional education. A classroom designed to sustain the transfer of information from teacher to student is not conducive to deep learning and retention. Rather, as supported by Barr and Tagg’s learning paradigm, it is informal education, collaboration, peer interaction, mentoring, reflection, and coaching that can provide the foundation for successful student retention of the course objectives and competencies.

O’Banion (1997a-c) expanded the idea of the learner-centered environment with the concept that the role of higher education faculty must be redefined by the needs of the learner. In most community colleges faculty responsibilities are described in a handbook that states the number of courses, the number of students per course, and the contact hours a faculty member will teach (O’Banion, 1997c). He suggests that faculty loading calculations should be put aside and instead faculty should be allowed to create new roles for themselves that put alternate learning structures in place to meet the new learning styles and technology requirements of the new incoming generation of students.

For many students the college classroom is the center of their educational experience. For students who must commute to college, especially those who have multiple obligations outside the college, the classroom may be the only place where students and faculty meet and where education in the formal sense is experienced. “The college classroom lies at the center of the educational activity structure of institutions of higher education, . . . If academic and social involvement of integration is to happen it must happen in the classroom” (Tinto, 1997, p. 600).

As faculty and student interaction and engagement increases there is a marked increase in learning gains reported over the course of a student’s stay in the college (Endo
& Harpel, 1982). Even so, lecturing is still by far the instructional approach most often used in postsecondary education (Bonwell & Eson, 1991; Carlson & Schodt, 1995). Many faculty members are quite skilled at delivering presentations that effectively cover the course content. Yet too often the lecture delivery method relegates the student to a passive learner whose success relies on his or her ability to absorb concepts and prowess with long-term memory functions. Lecturing is typically not as effective at delivering the full potential of a learning experience as when students are actively engaged in processing, or constructing, new information in a personally relevant way (Baxter Magolda, 2004).

A growing body of evidence, both experimental and correlative, suggests that active student involvement in learning has a positive impact on the attainment of the course content. Murray and Lang (1997) conducted classroom experiments in which topics in an undergraduate course were randomly assigned to be taught by either an active participation method or a control lecture-only method. For the topics taught by the active participation method, at least 75% of class time was spent in activities requiring active participation such as small-group discussion, question-answer dialogue, and case study debates. At the end of the course, the average student performance on both multiple-choice and essay examination questions was significantly better for topics taught by active participation than for topics taught by lecture.

Chickering and Gamson (1987, 1991) published a list of seven principles for good teaching practices in undergraduate education. These practices are grounded in research on student development and higher education instruction and include the importance of such things as active student involvement in learning activities, student involvement in
cooperative learning activities, faculty and student interaction in and out of class, and prompt feedback to students on their performance.

Cornell and Luchetti’s (2004) research illustrates that an increase in faculty and student interaction allows faculty to identify individual student learning styles and to assist students in making connections with college resources to support students’ educational and career goals. Through increased faculty/student interaction students develop an increase in self-reliance and motivation and a greater retention of knowledge through deeper understanding of concepts and skills. Students realize that they are responsible for their own learning and that faculty, staff, and administrators are collaborators in their learning. Students have shown a more positive attitude toward their subject/career and are more prone toward lifelong learning. Furthermore, Cornell and Luchetti found that faculty can find more opportunities for interdisciplinary activities and cross-functional teamwork. Teaching is treated as a scholarly and professional activity with marked increases in job satisfaction (Cornell & Luchetti).

*Learning communities.* Learning communities are designed to provide more comprehensive and engaging experiences in the classroom than traditional courses and to give students and faculty more opportunities for increased intellectual interaction and shared inquiry (Knight, 2003; Tinto, 1997; Tinto & Love, 1995). The learning community model is a viable concept for community colleges because it allows a commuter institution to engage with their students in a more intensive and diverse way than normally occurs in the classroom. Tinto argued that participation in a learning community did increase the probability of persistence by facilitating the creation of supportive peer groups among students, encouraging shared learning and providing
students the opportunity to actively participate in knowledge creation. Learning communities offer the potential for more in-class engagement with commuter students, who may not have a chance to participate in social and other extracurricular activities at the college (Tinto).

Although it is possible for students of high ability to perform well on the conventional measures of learning, such as in-class tests, without having expended a great deal of effort, they are unlikely to be as successful in group learning situations where the absence of effort is perhaps more apparent. Moreover, because group members share responsibility for the final product collaborative learning appears to deemphasize competition in favor of cooperation. (Stage, Muller, Kinzie, & Simmons, 1998, p. 84)

Learning communities provide opportunities for students to develop an appreciation for the perspectives of others, make intellectual connections, and construct learning through dialogue (MacGregor, 1990; Smith, 1991).

According to Gonzales and Nelson (2005), there are specific techniques to introduce student outcomes-based learning in the learner-centered classroom. Experiential learning allows students to learn by doing rather than listening, in a hands-on, meaningful, and highly applied environment. Collaboration immerses students in a series of increasingly difficult projects while working in teams. In the learner-centered environment, students’ needs and learning styles drive the educational process rather than instruction designed around faculty interests and teaching styles. Integration weaves projects and course content tightly together. What students learn in class feeds into the
projects, increasing relevancy. As integration increases, the student’s commitment to personal goals and the institution is strengthened (Pascarella & Terenzini, 2005).

The outcome of project-based learning within the learning environment is noteworthy. Gonzales & Nelson’s (2005) research shows that students develop a better connection with the workplace and a more sophisticated skill set and knowledge of subject matter. Problem-solving and critical thinking skills are enhanced. Leadership and collaborative skills are shown to be better-developed. Students connect to each other, motivation increases and a sense of empowerment ensues (Gonzales & Nelson). This is a student who has developed the disciplined mind (Dewey, 1997), is ready for independence, and is an asset to the college and the community.

Learner-centered classroom environments. Traditional classrooms have not been able to facilitate the flexible transition required from one learning mode to another. Many college and university classrooms are based on a prescribed size and notion of use. The classrooms are distributed by the number of students to be accommodated. The faculty members in a classroom have their choice of rows of tables and chairs or rows of tablet arm chairs. Detailed accounts on classroom standards and how to analyze traditional classroom space, use, and utilization, taking into account such factors as scheduling and classroom stations, are available in such manuals as Fink’s (2002) Classroom Use and Utilization and Niemeyer’s (2003) Hard Facts on Smart Classroom Design: Ideas, Guidelines, and Layouts.

Current research on how students learn and retain knowledge is changing not only how teachers teach, but how facilities planners and architects design a classroom’s shape, size, organization, and furnishings. Classrooms need to be flexible and dynamic, must be
able to integrate new technologies, must be large enough to accommodate transformation, and must include furnishings that move easily and convert from one use to another (McDonough, 2000). Cornell’s (2002) research on the informal learning environment during our Age of Information includes studies in individual, collaborative, and self-directed learning. Cornell looked at how the physical classroom space supports learning and has investigated new environments for higher education. He states that information has a social life. “Communication, over time, leads to familiarity and camaraderie. From shared experiences and history, a culture emerges allowing trust and reciprocity to grow. Without face-to-face contact, social capital takes much longer to develop” (Cornell, p. 36).

Fielding (1999) examined the changing delivery methods of education. As referenced in Fielding’s title, Roger Schank believes today’s learning cycles should be divided equally among computer work, talking with others, and making something, none of which requires a formal classroom. Emphasis is placed on doing something as the best way for learning to occur; engaging students to take action, wrestle with failure, and develop emotional connections with the experience is the best solution for this task. The college and university classroom, once the domain of the professional lecturer, is fast becoming a multimedia-intensive, highly collaborative facility used to produce and consume media-rich materials (Valenti, 2002).

In a learner-centered classroom environment, the furnishing and equipment support conferencing and team brainstorming, training centers for spontaneous presentations, and quiet areas for reflection and concentration. The students are able to work in teams which allow social and peer relationships to develop. Without the
restrictions of the traditional classroom furnishings and equipment, faculty can more easily implement the integration of activities and experiences as found in Figure 1, Svinicki and Dixon’s (1998) experiential learning model. Students are allowed freedom to explore and think while being guided by their teacher who represents the world’s information and resources (Howe, 1963).

<table>
<thead>
<tr>
<th>Concrete Experience</th>
<th>Reflective Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratories</td>
<td>Logs</td>
</tr>
<tr>
<td>Observations</td>
<td>Journals</td>
</tr>
<tr>
<td>Readings</td>
<td>Discussion</td>
</tr>
<tr>
<td>Simulations/games</td>
<td>Brainstorming</td>
</tr>
<tr>
<td>Field Work</td>
<td>Thought Questions</td>
</tr>
<tr>
<td>Examples</td>
<td>Rhetorical Questions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abstract Conceptualization</th>
<th>Active Experimentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Simulations</td>
</tr>
<tr>
<td>Papers</td>
<td>Case Study</td>
</tr>
<tr>
<td>Model Building</td>
<td>Laboratory</td>
</tr>
<tr>
<td>Projects</td>
<td>Field Work</td>
</tr>
<tr>
<td>Analogies</td>
<td>Projects</td>
</tr>
<tr>
<td></td>
<td>Homework</td>
</tr>
</tbody>
</table>

*Figure 1. The Experiential Learning Model (Svinicki, 1998).*

*Environmental Psychology and Space Planning*

This section of the literature review explores the aspects of environmental psychology and space planning. The foundation for creating an effective learning
environment is an understanding and assessment of the key environmental components of physical dimensions, people factors, organizational structures, and collective social constructions (Strange & Banning, 2001). Maslow’s (1968) hierarchy of needs and Hall’s (1966) concept of proxemics are basic tools for assessing the physical dimensions of space and the basis for effective space planning and design of effective learning communities and group structure and dynamics. “The Starbucks Experience” (Michelli, 2007), provides the concepts behind its phenomenal social success, the coffee house design.

*Maslow’s hierarchy.* For this study Maslow’s (1968) hierarchy of needs is the initial link between the critical nature of the physical learning environment and student success. Maslow’s hierarchy of needs can be broken down into both psychological and physiological requirements. Maslow stated that most human requirements exist within a pyramidal hierarchy of five levels starting on the lowest level with the most basic biological needs of food and shelter finishing with the highest level of self-actualization (See Figure 2). Each level must be fulfilled before one can move to the next higher level need. Each of these human requirements can be supported, altered, or diminished directly by the physical environment.

![Figure 2. Abraham Maslow’s Hierarchy of Needs (Stewart-Pollack & Menconi, 2005).](image)
Fulfilling safety and physiological needs are the first steps in creating a successful engaged learning classroom. A student must first feel physically comfortable and safe in the classroom setting. The environmental factors of moderate temperature, sufficient light, good acoustics, and a comfortable chair provide the necessary physical comfort. Basic student and faculty security and well being are issues familiar to most higher education administrators; typically the minimum requirements are taken care of quickly, especially in these days of metal detectors at entrances and security officers roaming the halls. The Americans with Disabilities Act has assisted in providing easier facilities accessibility and usage for all students by mandating the width of institutional corridor and door openings for wheelchairs, the type of hardware to be utilized, suitable flooring and finishes, minimal requirements for lighting and acoustics and proper furnishing criteria to accommodate varying disability needs (Equal Employment Opportunity Commission & Department of Justice, 1991). Lighting and acoustics are important physical factors to consider especially for the physically challenged or the elderly student. Providing direct or task lighting in addition to the standard general lighting associated with most classrooms will help alleviate eye strain for those students with vision difficulties. Reducing ambient noise in the classroom assists the hearing impaired to discern dialogue and feel more connected to the conversations (Karlen & Benya, 2004; Sorkin, 2000).

The need to belong is a student’s requirement to feel a part of a learning community that is pleasant, nurturing, and connected to other students, the faculty, and the profession. As human beings we want to care and to be cared for (Noddings, 1984). Students must be able to communicate and interact and must have time and opportunities
to develop camaraderie and peer relationships in order to feel a sense of belonging. Traditional classrooms, with rows of tables, straight-line seating, and a lecture delivery format do not allow interaction to take place, stifling the relationships that are critical to allow a community to become established (Hall, 1966). This is a particularly crucial issue when many non-traditional students do not have the time to participate in activities and develop relationships outside of the classroom (Tinto, 1997). Esteem needs require the time and place to reflect and begin to take ownership of the newly gathered data. Ultimately, self-actualization takes place when the student makes the connections necessary by applying the new knowledge and skills through self-observation and self-evaluation. It is through participation in classroom learning communities and activities that relationships and friendships develop (Tinto).

As cited in Tinto & Russo (1993), Seattle Central Community College developed a learning community model where faculty and students worked together as a collaborative team in the classroom to challenge student assumptions about how knowledge is constructed and have students take personal ownership for the learning process. The result was a learning process that students determined to be richer and, for some, more empowering.

Maslow’s (1968) theory illustrates the importance of the physical classroom environment and its role in supporting a student’s sense of security and safety, belonging, and well being. Proper spatial design and the incorporation of appropriate personal distances and territories are significant pieces of the critical design criteria necessary to create an environment that allows students to network and socialize comfortably and to
maintain a sense of control over the actual physical space that they occupy (Stewart-Pollack & Menconi, 2005).

Hall’s proxemics. To begin the transformation from a traditional classroom to a learner-center environment an understanding of the psychology of space and communication is necessary. Hall (1966) coined the term *proxemics* as the study of how people use space to communicate based upon social and cultural influences. Hall’s concept of personal space relates to the invisible boundaries that extend from each individual creating distance zones that can change depending upon the circumstances and the environment. These distance zones or *personal space bubbles* regulate our comfort level for interaction and accessibility to others.

Hall (1966) states that these bubbles can vary from contact cultures, for example Arab, Asian, and Latin, to noncontact cultures, for example Northern European and North American. Age, socioeconomic status, ethnic background, personality characteristics, and gender can also determine an individual’s preferred spacing requirements. Men tend to have larger personal space bubbles than women (Hall). Formal environments can cause us to maintain larger personal space bubbles, while more familiar environments can promote a more close physical contact (Stewart-Pollack & Menconi, 2005).

Hall (1966) identified four distance zones that occur in most social interactions: intimate, personal, social, and public. The following measurements are based on Northern American cultural requirements for social dealings (See Figure 3):
**Intimate Distance** extends zero to 18 inches from the body. At this distance personal senses are maximized through sounds, smells, body heat, and physical contact. Speech at this distance is soft or whispering (Hall, 1966). Typically reserved for comforting and lovers, anyone entering this zone uninvited is considered an intruder or a threat (Stewart-Pollack & Menconi, 2005). The straight-line seating found in most classrooms maximizes square footage, but places students side-by-side, often within one another’s intimate distance. In order to compensate for this close proximity, students will tend to avoid eye contact and conversations with their immediate neighbors due to the inappropriateness of close physical contact with a stranger and the intimate nature of the whisper.

**Personal Distance** extends 18 inches to approximately four feet from the body. Physical contact is possible but sounds and smells are less noticeable than in the intimate zone (Hall, 1966). It is the common distance for interaction among friends and a transitional distance between intimate and the more formal social zone (Stewart-Pollack et al., 2005).
& Menconi, 2005). This is a distance that is appropriate for socializing in the classroom, yet the traditional classroom with its rows of tables places the backs of most students in this critical conversational distance, prohibiting conversation and interaction from taking place.

_Social Distance_ is the zone from four to twelve feet from the body. Within the closer phase of this zone (four to seven feet) impersonal business and casual social contact is conducted (Hall, 1966). This is the critical distance to incorporate when planning the layout of the learning-centered/coffee-house concept classroom. This is where most everyday conversation takes place. Voice volume is neither a whisper nor loud. The neighbor’s personal hygiene and physical details are less noticeable (Stewart-Pollack & Menconi, 2005). The far phase of this distance, seven to twelve feet, is more appropriate for formal business conversation or informal classroom presentations.

_Public Distance_ extends 12 to 25 feet from the body. It is the distance maintained in formal situations or defensive position with strangers (Hall, 1966). This is the distance usually afforded to public speakers or those regarded as “high-status.” This distance is required in the learner-centered/coffee house concept classroom for formal presentations, guest speakers, and conflict management. Many adjustments in communication are made at a public distance, including raising one’s voice and exaggerating gestures that might be considered too aggressive or intimidating for a personal or social distance (Stewart-Pollack & Menconi, 2005).

Interior environments can be designed to discourage or encourage communication and interaction. Interiors that promote interaction and bring people together are known as
sociopetal spaces. Interiors that support introspection and individual reflection or force people apart are known as sociofugal spaces (Hall, 1966).

In order to create a sociofugal environment that discourages interaction among its occupants, a cool hue color scheme is typically utilized which creates a calm and serene environment that supports introspective and reflective tasks (Thompson, 2003). Seating arrangements should allow an occupant to be well outside the intimate zone of those seated next to him or her. The larger the classroom space the greater the distance between seats. Seating should be arranged as to avoid direct eye contact and support privacy. If space is at a minimum, straight-line seating can be incorporated to discourage communication. Applying sociofugal design concepts to testing, research, and study centers can ultimately assist students by providing an environment conducive to concentration and increased attention spans (Young, 2003). A sociofugal seating arrangement is successful in most traditional lecture-based classroom settings, allowing a focused attention on the faculty speaker.

Interactive and socially responsive sociopetal environments are generally warm and inviting. Warm colors in the range of reds, oranges, yellows, and golden hues within an interior tend to promote a stimulating and inviting response from its users. These warm hues have been shown to promote extroversion and interaction (McCoy & Evans, 2002). Seating arrangements utilizing Hall’s (1966) social and personal distances facilitate casual and easy conversations. Seating placed at right angle arrangements, between 5’ to 8’ from center of seats, provides for the most comfortable conversation arrangements rather than seating placed directly across from one another (Deasy, 1985). Seating at a right angle eases confrontation and provides comfortable eye contact (See
Figure 4. Social spaces conducive to conversation and exchange such as student centers, labs, learner-centered environments, food courts, and coffee house concept classrooms are all examples of interactive environments that benefit from sociopetal design principles.

Figure 4. Conversation Arrangements and Distance.

*Synomorphy.* Another important behavior-setting theory is based on the concept of synomorphy. The principles behind synomorphy necessitate that the physical and social aspects of an environment should be compatible and capable of changing as the needs and requirements of users or participants evolve over time (Gifford, 2002). For a setting to be successful the site must incorporate not only the components of good design but physical, social, and environmental considerations as well. A setting designed without these considerations is considered to have been developed with architectural determinism (Bell, Greene, Fisher, & Baum, 2001) or the direct and absolute relationship between the designed environment and a particular behavior. For example, the historic arrangement of
a traditional classroom can be an environmental cue that initiates a behavior in the student similar to that experienced in childhood. The behavior manifested is often unconscious and the person is unaware of the setting’s potential influence on his or her behavior (Bargh, Lombardi, & Higgins, 1988).

**Group Discussion Theories**

Group discussion involves an interaction among persons in such a manner that each member influences and is influenced by the other (Shaw, 1980). Groups can be large or small in size and scale. For the purpose of this study, a classroom is considered a small group as defined by Brilhart, Galanes, and Adams (2001) as “a group small enough that each member is aware of and able to recall each other group member, know who is and is not in the group, and recognize what role each is taking” (p. 8). Within the large primary classroom group, smaller secondary groups may be formed to discuss shared activities or solve shared problems. In order for small group discussions to be successful, talking must take place, typically face-to-face, so that each person has a sense of belonging and being part of the group, and each member hears and understands the verbal and nonverbal communication occurring (Brilhart et al.).

Spatial configuration is vital to the success or failure of small group discussions. People sitting across from each other speak more often to each other than people sitting side by side (Brilhart et al., 2001). If a group is meeting in a space normally used for another activity, the normal use of that space may change the group’s interaction; for example, meeting in a member’s living room may encourage informality. Meeting in a formal table arrangement encourage formal interaction, whereas meeting in a lounge with comfortable sofas does not (Shaw, 1980).
The Coffee House Concept

One cannot mention the coffee house without bringing to mind the globally successful Starbucks Coffee. Starbucks’ business philosophy and practices have much to offer the higher education environment. Each customer’s experience begins with an individual entering into a comfortable setting where they are valued on a personal level and where a meaningful connection is made. Known as the “Starbucks sensation” (Michelli, 2007), a customer no longer is just purchasing a product; he or she is purchasing an experience involving the ambience of the entire setting including the relationship and interaction of the sales staff and the quality and comfort of the physical environment. Consistently, people experience Starbucks as warm, comfortable, and pleasurable. Everything the company does is intended to give the customer a positive experience. Starbucks is vigilant about the music in the background, pleasant colors, comfortable furniture and the right amount of lighting. Corporate Design Foundation (1994), a non-profit education and research organization, stated “What Starbucks recognized long before its imitators was that the art of retailing coffee went way beyond product. The details of the total experience mattered” (p. 49).

To achieve this, the ambience of the store must be inviting; the store must be a place where a person will feel comfortable to hang out alone or with friends. Starbucks refers to its setting as the “third place” in a person’s life after home and work (Michelli, 2007). Patrons are able to customize their beverages with assistance from their barista, the Italian word for bartender and the term used at Starbucks for a coffee preparer (Starbucks, 2007). Customization means satisfying each customer’s unique expectations and requires the discovery of each customer’s needs and individual situation (Michelli).
At Starbucks, *being welcoming* is an essential way to get the customer’s visit off to a positive start (Michelli, 2007). It is also the foundation for producing a warm and comfortable environment. While most individuals would not think of inviting guests into their homes only to ignore them, many businesses fail to greet their customers upon entry in the door. “People want to be made to feel as if they really do count for something. . . . They want a place where they can belong in the community” (Michelli, p. 22). Starbucks management defines “be welcoming” as offering everyone a sense of belonging. Starbucks’ mission statement also includes positive contributions to the community and the environment. Customers feel as though they are participating in community service by purchasing and participating in the Starbucks experience (Starbucks, 2007).

*Furnishings and Equipment in the Engaged Classroom*

Contrast Starbucks with a traditional coffee counter developed for efficiency or a café with a long counter, as portrayed in Hopper’s painting Night Hawks. Section three of the literature review investigates the components of the engaged classroom. To begin the transformation from a traditional classroom to a coffee house concept design, the classroom must encourage and facilitate inquiry and experimentation, inspire and stimulate the imagination, expose the students to a variety of opportunities to utilize their knowledge, and provide for a variety of stimuli for learning. The classroom should support social interaction and allow for organization of units that are small enough to ensure that all students have ready access to assistance. Students should feel good about spending time in the classroom (Duke, 2001).

According to Plater (1995), the new 24/7 ability to access information will mean the classroom will lose its standing as the primary source of information. The faculty
member now has the ability to place course lecture information or entire lecture video presentations online, allowing students to take more responsibility for obtaining the course instructional material prior to the course meeting. Actual time spent in the physical classroom can be freed from the routines of information delivery and instead utilized for interactive large and small group discussions and activities that promote assimilation of course information (Miller, 2006). As a result of these new information delivery systems students are developing new and unique socializing and study habits which mean the higher education institution must adapt the physical environment to support these new developments. This will also mean changes in the student-faculty relationship. This student-faculty relationship will likely be influenced by the expectations of the age or generational cohort of both the faculty and the students within the classroom environment.

As the classroom morphs from its role as an environment supporting the mass delivery of lecture information to an environment that supports discussion, interaction, and community building, the furnishings and equipment must change as well. The classroom will require furnishings and equipment that can incorporate and integrate Hall’s (1966) proxemics and the requirements of the sociopetal environment. The coffee house concept classroom must offer flexible furnishings that support a variety of student and faculty working and learning arrangements.

Flexibility comes in many forms. Using the coffee house as a model for our classroom, a variety of work surface heights and seating types will allow faculty and students the option of choosing the personal working style that is most appropriate for their individual learning style or for the classroom task activity. Low dining height tables,
bar height tables with stools, and comfortable upholstered seating should be integrated into the seating arrangements. Various size groupings of furnishings allow students to sit individually, in pairs, or in larger group configurations. Lightweight, mobile tables and chairs on casters allow the users to easily reconfigure the space for large group lectures or for small group activities. An area for beverages or snacks give students “permission” to leave their seats, get up and stretch, or remove themselves from uncomfortable postures or possible confrontational situations.

Classroom furnishing and equipment capable of supporting communication technology provide the basis for the structure of the higher education environment. Many of the educational furniture and equipment manufacturers are supporting the research findings by developing products that will accommodate the new requirements of the higher education settings. They are developing furnishings and equipment that will accommodate a flexible learning environment and integrated technology. Ergonomic lightweight furniture, wireless capability, and mobile instructor stations mean unencumbered access to electronic data and research for the learner-centered classroom; communication can happen anywhere. Smart boards and writing walls display, record, and recreate class notes and information at the touch of a button. Podcasting and wiki open editing encourage students to experiment with personal digital assistants (PDAs), cell phones, and pocket personal computers (Miller, 2006).

*Variable Relationships*

Section four of the literature review looks at the variables of gender and age/generational cohort and their relationships to the study to determine if generational
cohorts have different responses to a learner-centered/coffee house concept classroom environment based upon their own educational and life experiences.

Gender. It is unclear whether or not the variable of gender will be significant in this study. Research on gender interaction in the classroom is prevalent in the study of children: less is known about the dynamics of higher education classroom settings (Fassinger, 1995). Recent research includes the findings of Sandler, Silverberg, and Roberta (1996) who wrote the study on the chilly classroom climate. Their research found women are disadvantaged in college because of professors’ differential treatment of students by gender. Although their work was only exploratory in the higher education classroom experience, they did raise numerous research questions that can provide insight into the college classroom including issues of gender differences in student and faculty’s classroom behavior and interaction.

Age/Generation. As baby-boomers hit retirement age, they are expected to flood the community colleges for training and new credentials necessary for second careers. Currently retirement-age students make up about 12 percent of the community college enrollment. This is an increase of 30% from 2003 to 2006 and this number is expected to double by 2010 (Read, 2004). This new seniors market will consist of three groups: college-educated people who are not quite ready to retire but are ready for a career change; blue-collar workers with little or no college education but who may not have the physical well-being to continue in manual work; and people who have a retirement income and are looking for education for recreation (Olson, 2006).

For the first time in history, four generations can now be found populating higher education classrooms (Hanks & Icenogle, 2001). Though the names and dates of each
generation vary slightly depending upon the source, for this study Strauss and Howe’s (1991) titles and birth years will be utilized: the Veterans, 1922-1943; the Baby Boomers, 1943-1960; Gen X, 1960-1980; and the Millennials, 1980-2000. Each of these generations brings a variety of values, life experiences, and learning expectations into the classroom.

Veterans were taught as children to follow their leaders with respect. Rarely will a Veteran speak out against authority (Strauss & Howe, 1991). Their elementary classrooms were set up in rows imitating assembly lines, all eyes front and center, to teach these youngsters to sit quietly, listen, and obey the teacher. This setting was excellent for preparing a workforce for their future in manufacturing, the military, or the workforce. Veterans may feel the most comfortable of all generations in the traditional classroom environment.

The Baby Boomers were the first generation born in which child rearing was a pleasure and not an economic necessity or a biological inevitability (Zemke, Raines, & Filpczak, 2000). The Boomers were cherished and indulged. Boomers learned they had to collaborate in their crowded school classrooms; they were the first generation to be given a grade for “shares with classmates” and “works with others” (Zemke et al.). They liked school as kids, and they continue to like it today as witnessed by their attendance at evening and weekend classes. The National Center for Educational Statistics reports that 40% of Americans were enrolled in adult education classes last year, up from 10% when the veterans were middle aged (Institute of Education Sciences, 2006).

Gen Xers are the most technologically savvy group yet to enter the higher education environment (Zemke et al., 2000). They have a nontraditional orientation about
time and space. They believe work hours can take place anytime and anywhere and that no one should be allowed to tell them how to get the job done. Gen X appears to have no problem multitasking and working independently. This generation will independently use Internet self-study guides. They may not go through the guide in the order you want them to, but they will learn the important materials. Their approach to authority is casual and informal. Their tendency, therefore, is to treat the chancellor just the way they would the department administrative assistant (Zemke et al.).

There are approximately 72.9 million members of the so called Millennial generation in total, nearly one-third of the entire U.S. population (Strauss & Howe, 2000). These children have been protected and indulged by their families, accompanying their parents to the office, the finest restaurants, and European travel. One-third of all teens are working 20 hours a week, with schedules monitored and regulated by their parents. A typical Millennial will get along with all generations, but seem to have a great deal in common with their grandparents, the Veterans. The Millennials seem eager to adhere to a stricter moral code, manners, and good behavior. This generation is new to the higher education environment. They are entering the classroom under the protection of their parents and advocates (Strauss & Howe).

According to Prensky (2001), this new Millennial generation, sometimes named digital natives, has grown up with technology. They will demand state-of-the-art technology in the classroom because this is what they have at home. They are not interested in large impersonal lecture classes; instead they prefer intimate class settings where they are able to get to know their classmates. They will be comfortable working with study groups and with the integration of text messaging or e-mail forums to
communicate with their classmates. They will want a learning space in which they can get to know their classmates and work together or independently in a collaborative environment that supports understanding and learning.

**Review of Relevant Research on Methods and Procedures**

This final section of the literature review examines the relevant research on the study’s methods and procedures. According to Tobin and Fraser (1998), a desirable goal is to combine quantitative and qualitative methods within the same study in research on classroom learning environments. There are many economical and widely-applicable questionnaires available that have been developed and used for evaluating students’ perceptions of the classroom environment. One approach systematically codes classroom communication and events (Brophy & Good, 1986). Another approach involves application of naturalistic inquiry, ethnography, case study, or interpretive research (Erickson, 1998). This latter method defines the classroom environment in terms of the faculty and students’ perceptions, which has the advantage of characterizing the setting through the eyes of the participants and capturing data that might have been considered unimportant to an observer. Students and faculty are allowed to make their individual judgments about the classrooms because they may have encountered many different learning environments and are able to use their experiences to form accurate personal impressions.
CHAPTER 3

Study Design & Methodology

This study investigates the impact of a learner-centered or coffee house concept classroom on student and faculty interaction and the perception of academic and teaching success. The coffee house concept classroom incorporates the interior elements and principles of environmental psychology and design that have been shown to encourage, promote, and support student and faculty interaction and engaged learning as compared to a teacher-centered or traditional classroom environment with rows of tables and chairs and the instructor front and center. The elements and principles applied in the coffee house concept classroom design involve spatial arrangements, proxemics, and furniture selection and the impact of these elements on the group dynamics of the classroom environment.

The research questions were used as a foundation in determining that a quantitative study with an interview-supplemented design and observation was appropriate in establishing if the coffee house concept classroom’s spatial design and layout impacts the perceived faculty-to-student and student-to-student interactions. The results of the “College and University Classroom Environment Inventory” (CUCEI) were used as the dominant tool (Creswell, 2003) to evaluate the students for the quantitative
measures within the study. An interview with the faculty was used as the less-dominant evaluation tool to support and elaborate on the qualitative measures within the study.

First research question. Are there differences in perception of the classroom environment between students who experience a traditional class setting and those who experience the class in a coffee house classroom setting?

Second research question. Are there differences in perception of the classroom environment between male students who experience a coffee house classroom from female students?

Third research question. Are there differences among students in particular generational cohorts (i.e., born between 1922-1943; born between 1943-1960; born between 1960-1980; born after 1980) in their perceptions of a coffee house classroom environment?

Fourth research question. How does the faculty member describe his experiences teaching and in-class observations in a coffee-house environment as contrasted with teaching and in-class observations in a traditional classroom setting?

Quantitative Design

Fraser (1986) described and compared nine major questionnaires for assessing student perceptions of classroom psychosocial environment. Of all nine questionnaires, only two deal with the higher education environment and one of these evaluates only the higher education science classroom setting. The CUCEI was developed for use in small higher education classes of up to 30 students (Fraser & Treagust, 1986; Fraser, Treagust, Dennis, 1986). The CUCEI was developed to provide coverage of the three general categories identified by Moos (1974) for conceptualizing all human environments. These
three general categories are *Relationship Dimensions* (the nature and intensity of personal relationships), *Personal Development Dimensions* (basic directions along which personal growth and self-enhancement tend to occur) and *System Maintenance and System Change Dimensions* (the extent to which the environment is orderly, clear in expectation, maintains control and is responsive to change). At least one of Moos’s three general categories is incorporated into each of the CUCEI categories. These three general categories will be the dependent variables for the study.

*Site Selection*

The community college chosen for this study was built eight years ago. The classrooms throughout the campus were designed and configured as traditional, lecture-style classrooms. A typical classroom is approximately 725 square feet, carpeted, and contains two large windows. Furnishings and equipment include approximately twenty-eight 30” x 36” tables each accommodating a computer, an instructor station, an upholstered chair, a large dry marker board, a ceiling-mounted projector, a computer linked to the internet, and a speaker phone. The lighting consists of standard 24” x 48” fluorescent troffers in an acoustical grid ceiling.

Three classrooms located within the School of Liberal Arts were utilized in this study. All are of near identical size, approximately 32’ deep x 23’ wide, and have similar architectural configurations including window placement, door location, and lighting layout, as are the majority of the classrooms within the facilities.

*Sample*

All participants were current students from Ivy Tech Community College of Indiana, North Central campus. This was a convenience sample of students scheduled to
take the ENG111 English Composition courses in room 2203 and room 2220 during the
spring 2008 semester. The ENG111 English Composition course was chosen for this
study because it is a requirement of the general education core for all program curricula
in each of the six schools of the college—Fine Arts and Design, Business, Health and
Human Services, Liberal Arts, Public Services, and Technology—and as such will
contain a diverse student population that represents the demographics of the college.

Originally, the study was to involve two different faculty members teaching the
six ENG111 courses: each faculty member teaching at least one ENG111 course in a
converted coffee house classroom and at least one course in a traditional classroom. An
unforeseen scheduling conflict occurred between the fall and spring semesters.
Ultimately, the study involved one faculty member who taught all six course sections:
three in the traditional classroom and three in the coffee house classroom.

The six courses involved in the study were as follows: ENG111-01 offered from
8:30am – 9:45am on Mondays in the Coffee House Classroom and Wednesdays in the
Traditional Classroom A, ENG111-04 offered from 11:30am – 12:45pm on Tuesdays in
the Coffee House Classroom and Thursdays in the Traditional Classroom B, ENG111-19
offered from 11:30am – 12:45pm on Mondays in the Coffee House Classroom and
Wednesdays in the Traditional Classroom A, ENG111-26 offered from 1:00pm -2:15pm
on Mondays and Wednesdays in the Traditional Classroom A, ENG111-29 offered from
1:00pm – 2:15pm on Tuesdays and Thursdays in the Traditional Classroom A, and
ENG111-51 offered from 6:00pm – 8:45 pm on Mondays in the Traditional Classroom B.
Each class has an enrollment cap of 28 students per room. If each class had reached its
maximum seating capacity, the total study population would have consisted of 168 students.

The chosen community college has an open-enrollment policy. Any student who has the prerequisite basic reading and writing skills can take the course. The typical classroom contains a variety of student ages, genders, ethnicities, and cultures. Students must be at least 16 years of age to take a course and senior citizens are allowed to take courses for free. All students in the traditional and coffee house classrooms were asked to voluntarily complete the study instrument. There was no recruitment for this study. Students registered for the ENG111 course based on their individual priorities such as scheduling requirements, instructor preference, or course availability. Most students were not aware of the differences in the classroom settings at the time of registration.

There were no incentives provided to participate in the study. There were no consequences for the research if a student decided to drop out of the ENG111 course. There were no additional costs accrued by the subjects as a consequence of participating in the research.

Instrumentation

Fraser’s (1986) CUCEI was used to assess the students’ perceptions of the interaction within the coffee house concept classroom. The CUCEI contains seven 7-item scales, for a total of 49 items. The seven scales are Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation, and Individualization. Each item has four responses: Strongly Agree, Agree, Disagree, Strongly Disagree; the polarity is reversed for approximately half of the items. Items are arranged in cyclic order so that the first, second, third, fourth, fifth, sixth, and seventh item, respectively in each block,
measures Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation, and Individualization. Items whose item numbers are underlined are scored 1, 2, 4, and 5, respectively, for the responses Strongly Agree, Agree, Disagree and Strongly Disagree. All other items are scored in the reverse manner. Omitted or invalidly answered items are scored 3 (Fraser et al., 1986). The survey requested information on the students’ gender and age to obtain generational information to answer the second research question.

Reliability and validity of the CUCEI. Comprehensive validation research has been completed on the CUCEI to confirm the internal consistency reliability and discriminate validity of the instrument (Fraser et al., 1986).

Dependent Variables

The dependent variables are the three general categories found in the CUCEI. These three general categories are Relationship Dimensions, the nature and intensity of personal relationships; Personal Development Dimensions, basic directions along which personal growth and self-enhancement tend to occur; and System Maintenance and System Change Dimensions, the extent to which the environment is orderly, is clear in expectation, maintains control, and is responsive to change.

Independent Variables: Gender and Age/Generation

The quantifiable variables were selected to determine if gender and/or age, specifically the generational cohort, play a role in the faculty or student perception of the coffee house concept classroom design and to determine if there is a classroom preference among those of a similar gender or age group. The age variable was divided into brackets on the survey that coincide with a generational cohort: the Veterans, 1922-

 Procedures

The six ENG111 English Composition classes chosen for this study were originally scheduled by the School of Liberal Arts to be held in one of two traditional classrooms, room 2203 or room 2220. These two classrooms both contain the standard furniture and equipment configuration as described in the site selection section above. For this study, these rooms are designated Traditional Classroom A (room 2203), and Traditional Classroom B (room 2220). Photographs of these two classrooms are included in Appendix A.

For this study, three of the six ENG111 courses were held, as originally scheduled, entirely in either Traditional Classroom A or Traditional Classroom B. These three classes are the control classes for the study. The three remaining ENG111 courses were split between the traditional classroom and the newly converted coffee house concept classroom; one session a week was held in the traditional classroom and the second session of the week was held in the coffee house classroom, room 2221, thus allowing the students in these classes the opportunity to experience both classroom environments.

Room 2221 was approved to be modified and converted into the proposed coffee house classroom during the break between the fall 2007 and the spring 2008 semester. To make the transformation to the coffee house concept classroom, room 2221 was designed as a sociopetal environment (Hall, 1966); arranged so as to encourage and support academic and social discussions, group problem solving efforts, peer mentoring, and
conflict management. The coffee house concept classroom integrated a variety of seating options and conversation areas to facilitate group discussions and team problem solving. Students were able to choose the working, communication, and social interaction options that felt most comfortable to their personal learning style.

The furniture arrangement offered students choices much like they would find in a home environment with comfortable upholstered seating, end tables for convenience, dining height tables with chairs for group problem solving, and bar height tables with stools. Rather than straight line seating, which discourages conversations, Hall’s (1966) social distance was used as a guide. The furniture layout incorporated seating in the round and right-angle seating as much as possible for comfortable one-on-one and group conversation arrangements. Photographs illustrating the coffeehouse classroom’s content and layout can be viewed in the photos found in Appendix A.

The furniture selection was based on flexibility, storage convenience, ability to integrate technology, and comfort for a variety of body types. The furniture was capable of being easily moved into groupings supporting medium and small group activities and group presentations. Twenty-eight seats of various sizes, heights, and uses were incorporated into the coffee house classroom. The furniture used in the classroom was existing and brought in from several locations around the college. A floor plan of the coffee house concept classroom design is included in the Appendix B. The Liberal Arts faculty teaching the courses in the classroom reviewed the proposed furniture selections and arrangement, provided their input, and gave their final approval.

Eight upholstered sectional pieces were incorporated from the student lounge and arranged in the form of a circle in the front of the classroom, centered on the instructor’s
station. These upholstered pieces were comfortable and able to hold a large student without restriction. Three of the pieces had attached side-arm tablets for students to use to take notes. Five lap-tables were purchased during the third week of classes after a faculty member from a communications class expressed concern that the students in these seats did not have a comfortable writing surface. Though fairly substantial in size, these upholstered pieces are very easy to move around the room.

Four rectangular 24” wide by 60” long classroom tables from the original classroom setting were incorporated into the coffee house furniture arrangement. These tables were placed behind the ring of upholstered pieces along with eight of the stackable hard shelled chairs. Two chairs were placed to a table. These tables were standard desk height and allowed students a comfortable writing surface on which to take notes. Though the tables are heavy and not easily moved, the chairs are lightweight and can be carried if moving is required.

Six tablet arm chairs from the original classroom setting were “scattered” around the room. Though tablet arm chairs rarely accommodate a large student, they are easy to get in and out of for smaller statured persons. These chairs also allow for flexibility because they are relatively easy to move from one grouping to the next and also allow a student to sit independently, in their own “turf,” rather than sharing space with another student.

One round 42” table with two chairs was centered across from the instructor station incorporated into the ring of upholstered pieces. The two chairs could be angled towards the table for note taking, straight ahead when lectures were held, or to the side
when the occupant needed to be involved in a discussion with those students on the upholstered seats.

Two bar height round tables were placed in the back of the room, each with two high stools. These tables allowed students to stretch and stand easily without disruption and were high enough that the occupants could see over the heads of their classmates, also allowing the instructor to easily see them in the back of the room.

A beverage/snack area was included to allow students permission to get out of their seats and move about as desired, when standing was required for a visual discussion emphasis, or when snacks were necessary to keep up the creative energy, much like a kitchen setting. A small bar cart containing plates, napkins, cutlery, paper towels, a hand broom, and cleaning solution was placed along the wall in the middle of the room, along with a wastebasket. The students and faculty were told that food was allowed in the room, but all garbage must be disposed of properly or the privilege would be revoked. A coffee maker was not provided but students could bring coffee from the vending machines into the room, a practice which is not allowed in the other college classrooms. The position of the cart was easily accessible from any one point in the room and gave students “permission” to leave their seats.

Faculty have a desk in the front of the room, yet can assimilate into the seating circle as needed. The faculty were provided a line of sight to all seats in the room to maintain visual contact with all students. The existing instructor stand was left in the room but relocated from the center of the room to the front corner of the classroom, still within access of the marker board. The instructor stool was left behind the instructor stand, but an upholstered furniture piece was placed to the side of the stand, allowing the
instructor to be seated within the student circle at the same eye level as the other students. Whether behind the instructor stand or on the upholstered seat within the circle, the instructor had a clear view of all students in the classroom. Finish materials were selected based on the criteria of ease of maintenance, durability, color psychology, and ergonomic considerations of appropriate contrasts for ease of eye strain and physical comfort. The coffee house classroom held not only the ENG111 courses, but a majority of the communications courses including Public Speaking and Interpersonal Communication. A standing podium was placed in the front of the room within the student circle to facilitate student presentations.

Both the faculty member teaching and the students taking the ENG111 courses in the traditional classrooms A (room 2200) and B (room 2203) and the coffee house classroom (room 2221) were asked by me, the primary investigator (PI), at the start of the semester to voluntarily participate in the study. A copy of the consent to participate form is included in Appendix C. During the first class session, I provided a copy of the consent form to all students and the faculty member. I read the informed consent to the entire class stating that completing the instrument at the end of the semester constitutes their consent for me to use their data in the research.

At the start of the semester I arranged with the faculty member involved in the study a convenient time to enter his classrooms during the last three weeks of the spring 2008 semester. During the agreed upon day and time, I entered the class, stated the purpose of the visit, and provided all students with the CUCEI survey. Students were not asked to record their names but were asked to provide their gender and age/generational cohort to supply the needed data for the research question variables. Each student was
asked to mark directly on a separate response sheet. The students were provided approximately 15 minutes to complete the instrument. The CUCEI was given only once to each class. I recorded and evaluated the results.

Data Analyses

The quantitative analysis for this study is a comparison of the student responses to the CUCEI taken from the ENG111 English Composition courses held in the traditional classrooms A and B and the ENG111 courses held in the coffee house concept classroom during the spring 2007 semester. The original study proposal stated an ANOVA would be utilized to determine what inferences could be made about the population mean differences in students’ perceptions of the actual classroom environment in each of the CUCEI’s seven 7-item scales—*Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation,* and *Individualization*—and the relationship of the variables of gender and age/generational cohort. Appropriate follow up tests were to be used as indicated by the data analysis. Upon the completion of the student survey it was determined that the numbers were too small to successfully utilize the ANOVA, instead a series of t-tests were implemented that provided more accurate and rigorous results for the small sample numbers.

I retained all completed CUCEI response forms in a secure and locked location during the analysis of the data and after the completion of the research.

Qualitative Design

The second data collection method was a qualitative interview, *The Faculty Experience,* conducted with the faculty member who taught the ENG111 course in the traditional classrooms and the coffee house classroom (See Appendix D). The qualitative
results from The Faculty Experience semi-structured interview protocol was used to elaborate and enrich the study from the faculty member’s comparative perception of the teaching and learning experience in the traditional classroom and the coffee house concept classroom.

Sample

As stated previously, the original proposal indicated that two faculty members would participate in the study, each teaching at least one ENG111 section in the traditional classroom and one section in the coffeehouse classroom. Unforeseen scheduling conflicts evolved during the latter part of the fall semester that offered two options for the study: a) choose multiple faculty and consequently, multiple sections of ENG111 offered during the day, the afternoon, and evening, or b) choose one faculty member who was teaching six sections of ENG111, five during the day and afternoon and one section in the evening. The first option did not provide consistency or parallels between the faculty and the course offerings. The first option also involved adjunct faculty who were relatively new to the college and had not yet established a solid teaching track record. The second option was selected because it involved one faculty member primarily teaching courses offered during the day. The faculty member who taught the six sections of ENG111 has been with the college for over 20 years, primarily teaches ENG111, and regularly teaches five to six sections of ENG111 every semester, so his involvement with the study did not create an unusual or atypical semester schedule. This option was deemed to offer the most reliability for the study.
**Interview Method**

The second data collection method was a qualitative interview, titled The Faculty Experience. This interview was used as the less-dominant (Creswell, 2003) evaluation tool to support and elaborate on the qualitative measures within the study.

The interview was conducted one-on-one with the faculty member who taught the ENG111 courses in the traditional classrooms A and B and the coffee house classroom and requested the faculty member to compare and describe in detail the experience of teaching in the classroom environments.

The interview requested information-rich questions on the faculty’s perception of student collaborative learning, efficacy and satisfaction, sense of belonging, and growth. The faculty member was asked to compare teaching in the coffee house classroom to other courses he has taught in traditional classroom settings and to evaluate the classroom’s ability to support all required activities and learning experiences. The faculty member was also asked for his perception of the relationships and interactions that occurred in the classrooms.

In order to ensure consistency and dependability of the data, the original study proposal stated the PI would observe the courses twice, once at the start of the semester and once during the midpoint of the semester to witness and record the quantity and quality of faculty-to-student and student-to-student interactions. During both of the scheduled visits the faculty member teaching the six courses in the study was out of the classroom; once due to knee surgery and once due to the flu. Photographs were taken of the classes during these scheduled times to record where the students were sitting but no
written observations were made. Written classroom observations were made once during the 15th week of classes.

A digital recording was made of the faculty interview. I transcribed the recording. Providing rich, thick descriptions was the major strategy utilized to ensure external validity or generalizability in the qualitative sense (Merriam, 2002). Called case-to-case transfer by Firestone (1993), in order to facilitate the transfer findings from one study to other situations, the researcher must provide enough detail of the study’s context so that comparisons can be made (Merriam). Validity of the demographic questions stemmed from their inclusion in the literature on similar studies of classroom and teaching preferences. The interview protocols were piloted before being used to ensure their usefulness in acquiring the information desired in this study.

Procedures

The Faculty Experience was administered face-to-face and one-on-one during the last week of the spring 2007 semester by me. I requested the interview be held in the faculty member’s office. The interview took approximately ½ hour and was digitally recorded. The transcript from the interview is included in Appendix E.

Data Analyses

The qualitative results from The Faculty Experience survey were used to elaborate and enrich the study from the faculty member’s comparative perception of the teaching experience in the traditional classrooms A and B and the coffee house classroom.
CHAPTER 4

Results

This study incorporated a quantitative design with an interview-supplemented design, observation, and evaluation from the faculty member involved in the study to determine if the coffee house concept classroom’s spatial design and layout impacted the perceived faculty-to-student and student-to-student interactions. The results of the CUCEI were used to evaluate the students for the quantitative measures within the study. An interview with the faculty member was used as the evaluation tool for the qualitative measures within the study.

Quantitative Results

The primary or dominant (Creswell, 2003) analysis tool used to assess the students’ perception of the interactions within the experimental coffee house concept classroom and the control traditional classrooms A and B for this study was Fraser’s (1986) CUCEI. The quantitative data results of the CUCEI were used to evaluate the first three of the four research questions:

First research question. Are there differences in perception of the classroom environment between students who experience a traditional class setting and those who experience the class in a coffee house classroom setting?
Second research question. Are there differences in perception of the classroom environment between male students who experience a coffee house classroom from female students?

Third research question. Are there differences among students in particular generational cohorts (i.e., born between 1922-1943; born between 1943-1960; born between 1960-1980; born after 1980) in their perceptions of a coffee house classroom environment?

The results of the students’ responses to the CUCEI taken from the ENG111 English Composition courses held in the control traditional classrooms A and B were compared with the student results from the ENG111 courses split between the traditional classrooms and the experimental coffee house concept classroom during the spring 2007 semester. A variety of tests were utilized to determine what inferences can be made about the population mean differences in students’ perceptions of the actual classroom environment in each of the CUCEI’s seven 7-item scales—Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation, and Individualization—and the relationship of the variables of gender and age/generational cohort.

The CUCEI surveys were given during the 14th week of class. Thirty-two students in total were in attendance in the three ENG111 sections held in the experimental coffee house concept classroom on the day the CUCEI survey was administered. Thirty-two surveys were completed by the students from these classes. Thirty-one students in total were in attendance in the three ENG111 sections held in the control traditional classrooms A and B on the day the CUCEI survey was administered. Thirty-one surveys were completed by the students from these classes. Though the numbers were small they
were consistent in size among all six sections of the courses involved in the study. See Appendix F for the ENG111 Course Completion Data.

Demographic Variables with the Relationship of Experimental Conditions

Tests were conducted to determine whether there were systematic differences between the experimental group and the control groups on demographic variables which might also be related to the CUCEI scores. Even though there were 63 cases, age and sex were given for 60 cases. Chi-square tests were utilized for these tests on all categories.

The first series of tests was conducted to determine if the independent variable of age cohort was a significant factor in the study results. According to the literature, there could be four groups divided into the brackets of the Veterans, 1922-1943; the Baby Boomers, 1943-1960; Gen X, 1960-1980; and the Millennials, 1980-2000 (Strauss & Howe, 1991).

Table 1
Age Variable

<table>
<thead>
<tr>
<th></th>
<th>Baby Boomers</th>
<th>Gen Xers</th>
<th>Millennials</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>3.2%</td>
<td>29.0%</td>
<td>67.7%</td>
<td>31</td>
</tr>
<tr>
<td>Coffee House</td>
<td>10.3%</td>
<td>41.4%</td>
<td>48.3%</td>
<td>29</td>
</tr>
<tr>
<td>N</td>
<td>4</td>
<td>21</td>
<td>35</td>
<td>60</td>
</tr>
</tbody>
</table>

Note. $\chi^2(2, N = 60) = 2.765, p = 0.251$

In the control classrooms one student was born between 1943 -1960, nine students were born between 1961 -1980, and 21 students were born after 1980. In the experimental classroom three students were born between 1943-1960, 12 students were
born 1961-1980, and 14 students were born after 1980. Because these classes had in total no Veterans and only four Baby Boomers the age categories were collapsed into two groups: GenXers and Millennials. A Pearson chi-square test result, $X^2(2, N = 60) = 2.765$, $p = 0.251$, was used to determine there were no statistically significant differences in the age variable between the experimental and control classrooms, but the control group did have more Millennials.

A second test was conducted to determine if the independent variable of gender was a significant factor in the study results. In the control classrooms 19 females and 12 male students were reported. In the experimental classroom 23 females and six male students were reported. A Pearson chi-square test result, $X^2(2, N = 60) = 2.317$, $p = 0.128$, did not reveal statistically significant differences in the gender variable between the experimental and control classrooms, but the coffee house group did have more women.

Table 2

<table>
<thead>
<tr>
<th>Gender Variable</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>61.3%</td>
<td>38.7%</td>
<td>31%</td>
</tr>
<tr>
<td>Coffee House</td>
<td>79.3%</td>
<td>20.7%</td>
<td>29%</td>
</tr>
<tr>
<td>N</td>
<td>42</td>
<td>18</td>
<td>60</td>
</tr>
</tbody>
</table>

Note. $X^2(2, N = 60) = 2.317$, $p = 0.128$
### Table 3

Age and Gender Variables in Combination

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>3.2%</td>
<td>19.4%</td>
<td>38.7%</td>
<td>9.7%</td>
<td>29.0%</td>
<td>31</td>
</tr>
<tr>
<td>Coffee</td>
<td>10.3%</td>
<td>41.4%</td>
<td>27.6%</td>
<td>10.0%</td>
<td>20.7%</td>
<td>29</td>
</tr>
<tr>
<td>N</td>
<td>4</td>
<td>18</td>
<td>20</td>
<td>3</td>
<td>15</td>
<td>60</td>
</tr>
</tbody>
</table>

Note. $X^2(2, N = 60) = 7.341, p = 0.128$

Next, tests were conducted to determine if the four categories of the independent variables of age and gender combined were significant in the study results. The results of a Pearson chi-square test did not reveal statistically significant differences, $X^2(2, N = 60) = 7.341, p = 0.128$, but the experimental group did have 52% older women and no older men.

In conclusion, although there were no statistically significant differences, it is important to watch for the effects of age and sex on the CUCEI, because of the over-representation of women and older students in the experimental group. Also, as further evidence there was not a difference in the demographic population when the completion rates of the experimental and the control groups were compared. Sixty of the 69 students, or 86.7% of those who started the courses, finished the three ENG111 courses held in the experimental coffee house classroom. Fifty-eight of the 67 students, or 86.7% of those who started the courses, finished the three ENG111 courses held in the control traditional classrooms A and B.
Relationship with the Classroom Environment

The second series of tests was conducted to determine whether age and sex were related to differences on the CUCEI. A series of $t$ tests was implemented instead of ANOVA tests, in order to provide a more accurate and rigorous results for the small sample numbers. The $t$ tests were conducted to determine what inferences can be made about the population mean differences in students’ perceptions of the actual classroom environment in each of the CUCEI’s seven 7-item scales—*Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation, and Individualization*—and the relationship of the variables of gender and age/generational cohort.

Table 4

Gender Differences between the Control and Coffee House Classrooms

<table>
<thead>
<tr>
<th></th>
<th>Women (N = 42)</th>
<th>Men (N = 18)</th>
<th>$t$ (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalization</td>
<td>3.22 (.52)</td>
<td>3.07 (.34)</td>
<td>.264</td>
</tr>
<tr>
<td>Involvement</td>
<td>2.89 (.38)</td>
<td>2.69 (.29)</td>
<td>.049*</td>
</tr>
<tr>
<td>Cohesiveness</td>
<td>2.19 (.54)</td>
<td>2.33 (.38)</td>
<td>.279</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>2.82 (.47)</td>
<td>2.67 (.46)</td>
<td>.241</td>
</tr>
<tr>
<td>Task</td>
<td>2.93 (.49)</td>
<td>2.72 (.45)</td>
<td>.121</td>
</tr>
<tr>
<td>Innovation</td>
<td>2.56 (39)</td>
<td>2.53 (.58)</td>
<td>.769</td>
</tr>
<tr>
<td>Individualization</td>
<td>2.60 (.37)</td>
<td>2.59 (.29)</td>
<td>.917</td>
</tr>
</tbody>
</table>

Note. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$
In the gender category, t tests determined that female students scored higher on the CUCEI in the area of Involvement, $X^2(2, N = 60) = 2.89$, $p = 0.049$.

In the age category, the combined Gen Xers and Baby Boomer group of students did differ on the CUCEI scale of Involvement. These t tests indicate that the null hypothesis for Involvement only would be rejected. Older students reported more involvement by scoring higher on Involvement, $X^2(2, N = 60) = 2.97$, $p = 0.014$. The test was close to statistically significant at the .05 level for Satisfaction, $X^2(2, N = 60) = 2.91$, $p = 0.059$, as well. Again, older students reported greater satisfaction.

Table 5
Age Differences between the Control and Coffee House Classrooms

<table>
<thead>
<tr>
<th></th>
<th>Xers &amp; Boomers</th>
<th>Millenials</th>
<th>t(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 25</td>
<td>N = 35</td>
<td></td>
</tr>
<tr>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personalization</td>
<td>3.26 (.49)</td>
<td>3.12 (.46)</td>
<td>0.269</td>
</tr>
<tr>
<td>Involvement***</td>
<td>2.97 (.38)</td>
<td>2.74 (.33)</td>
<td>0.014</td>
</tr>
<tr>
<td>Cohesiveness</td>
<td>2.28 (.53)</td>
<td>2.20 (.48)</td>
<td>0.530</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>2.91 (.49)</td>
<td>2.68 (.44)</td>
<td>0.059</td>
</tr>
<tr>
<td>Task</td>
<td>2.94 (.49)</td>
<td>2.81 (.47)</td>
<td>0.306</td>
</tr>
<tr>
<td>Innovation</td>
<td>2.60 (.44)</td>
<td>2.52 (.34)</td>
<td>0.442</td>
</tr>
<tr>
<td>Individualization</td>
<td>2.65 (.37)</td>
<td>2.56 (.32)</td>
<td>0.382</td>
</tr>
</tbody>
</table>

Note. *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$
In conclusion, higher scores for the experimental group, which has more women and older students, could be spurious for the CUCEI’s seven-item scales of *Involvement* and *Satisfaction*.

**Coffee House & Traditional Classroom Comparisons**

Each of the CUCEI’s seven scales was tested regardless of the experimental conditions of gender or age. Given the total number of student cases, unnecessary independent variable breakdowns were not added into the following tests because the cell size would never be larger than 32 which is already a small sample.

There were not enough student cases to justify using multivariate tests. *T*-tests were conducted to determine what inferences can be made about the population mean differences in students’ perceptions of the actual classroom environment because it is the most parsimonious test. More robust tests were not needed because neither the independent variables (the control classes held in the traditional classrooms A and B and the experimental coffee house classroom) nor the dependent variables (the seven scales of *Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation,* and *Individualization*) differed by sex or age.

Based on both the independent samples *t* tests and the group statistics *t* tests, a significant student perception difference did occur in two scale areas of the CUCEI. At the .10 or 90% confidence level there was significant difference in the scale of *Personalization*, $X^2(2, N = 60) = 3.31, p = 0.025$, and *Task*, $X^2(2, N = 60) = 3.01, p = 0.037$, in favor of the experimental coffee house classroom. On the other hand, there was a slightly significant student perception difference in the area of *Cohesiveness*, $X^2(2, N = 60) = 2.36, p = 0.058$, in favor of the control traditional classrooms A and B.
Table 6
Age and Gender Differences between the Control and Coffee House Classrooms

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Coffee House</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>M (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personalization</strong></td>
<td>3.05 (.47)</td>
<td>3.31 (.44)</td>
</tr>
<tr>
<td><strong>Involvement</strong></td>
<td>2.80 (.35)</td>
<td>2.89 (.40)</td>
</tr>
<tr>
<td><strong>Cohesiveness</strong></td>
<td>2.36 (.44)</td>
<td>2.12 (.52)</td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td>2.72 (.42)</td>
<td>2.85 (.52)</td>
</tr>
<tr>
<td><strong>Task</strong></td>
<td>2.76 (.53)</td>
<td>3.01 (.41)</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>2.56 (.35)</td>
<td>2.52 (.42)</td>
</tr>
<tr>
<td><strong>Individualization</strong></td>
<td>2.58 (.26)</td>
<td>2.64 (.41)</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001

Qualitative Results

“The Faculty Experience” interview was used as the less-dominant (Creswell, 2003) evaluation tool to support, elaborate, and enrich the study from the faculty member’s comparative perception of the teaching experience in the control traditional classrooms A and B and the experimental coffee house classroom. This interview with the faculty member was used as the evaluation tool for the qualitative measures within the study to answer the last of the four research questions:

Fourth research question. How does the faculty member describe his experiences teaching and in-class observations in a coffee house environment as contrasted with teaching and in-class observations in a traditional classroom setting?
Observations. In order to help validate the faculty’s response, I conducted classroom observations during the fifteenth week of classes to record the student-to-student and faculty-to-student interaction within the six ENG111 courses involved in the study. Because the observations were held during the second-to-the-last week of the semester, for reasons described in Chapter Three, the lecture/discussion sessions were completed and students were working in the computer labs completing all of their writing assignments. All of the observations were held in the traditional classrooms A and B. I attended the start of each of the six courses, noted the student seating pattern, the gender, and best estimate of age cohort of each of the students in attendance, the conversations, and the activities that occurred for the duration of one hour. The following is a summary of the interaction that I observed.

The students in the ENG111-01, experimental coffee house classroom, seemed to have a combined sense of congeniality and helpfulness. Students helped each other with software programs and equipment issues. Several peer-to-peer conversations as well as faculty-to-student conversations were witnessed.

The ENG111-19, experimental classroom, was a smaller group. There was not as much interaction among the students as there was in the ENG111-01 course. I did not see or hear any camaraderie, nor was there any dissention among the group. Spacing distance was large, making it difficult to converse at a low or moderate level. The instructor seemed more agitated or frustrated with this group with the exception of one student, who seemed to have completed all the required work successfully. Students seemed to be intent on working on assignments.
The ENG111-26, experimental classroom, had little peer-to-peer interaction. Most interaction was faculty-to-student or student-to-faculty. Students appeared to be comfortable asking the instructor questions pertaining to the classroom and outside of the classroom. Most students seemed to be focused on working on their assignments. There were no greetings or goodbyes as students entered or left the classroom.

In the ENG111-51, control traditional classroom, all students seemed intent on getting their work done. Three women seemed to have made a connection as witnessed through the number of interactions and conversations. These women were expressing frustration and discontent with the course and the instructor. Although a willingness to assist other students was demonstrated, no one seemed to be in need of assistance.

The general mood in the ENG111-04, control classroom, seemed to be lighter. There was considerably more activity than in the last three classrooms observed due in part to the lab tech and instructional technology staff interaction and in part due to student interaction and conversation. Students were not whispering as they were in ENG111-51 but instead were using a moderate voice level. There was laughter noted several times in the session.

The students in ENG111-29, control classroom, seemed to be intent on working on their assignments. The room was quiet a majority of the time with little interaction taking place between students with the exception of two students. The only interaction occurred between the faculty and the students. No one seemed to be in need of assistance, or no one asked their peers for assistance.

In summary, I did not observe significant differences in the quantity of the student-to-student or faculty-to-student interaction between the classes held in the control
traditional classrooms A and B and the experimental classes split between the coffee house classroom and the traditional classrooms A and B. The general tone of the conversations in both settings was task oriented. The only dissention witnessed was among the three women in the traditional setting.

There were differences witnessed through photographs taken of the experimental coffee house classrooms and the control traditional classroom A taken earlier in the semester. Photographs taken of the coffee house classroom illustrate the attention of the students were, for the most part, on the teacher. The photo of the students in the control classroom illustrate the attention of the students were on the computer screen.

*Figure 5. ENG111-01, coffee house, taken on 02/18/08, photo one*
The two photos above were taken at the start of class. The instructor is seated at the instructor stand. As witnessed in the photos the students are able to move about the room freely during the class.
The two photos above were taken at the start of a COM101 Fundamentals of Public Speaking class session. The instructor stands at the instructor station and greets the students as they enter. In the first photo students appear to be looking at the instructor. In the second photo two students appear to be interacting while several students watch the interaction.
Figure 10. ENG111-19 taken on 02/18/08, photo two

Figure 11. ENG111-04 taken on 02/19/08, photo one
Figure 12. ENG111-04 taken on 02/19/08, photo two

In the two photos above, the instructor sits at the instructor station. Most students appear to be looking at the instructor. One student has her feet on a stool. She appears to be comfortable in the surroundings.

Figure 13. ENG111-26 taken on 04/24/08, photo one
This photo was taken at the start of class. The Instructor assists a student in the far left corner of the room. Most students appear to be looking at their computer screens. Two students look at the primary investigator taking the photograph.

**Interview.** The faculty interview was recorded during the last week of the spring semester. I asked questions which were answered and elaborated upon by the faculty member teaching all six sections of the ENG111 courses involved in the study. See Appendix E for the complete transcription of the faculty interview. The following is a summary of the faculty interview:

In my class there is a mixture of discussion and writing. We have to have discussions in order to kind of generate the ideas that people can write about, to make the kind of connections and the kind of clarifications that, that they need to see in order to do the kind of academic writing that is required in ENG111. In the traditional classroom, where everybody is facing the teacher, starting a discussion is often times kind of a daunting thing because everyone seems to be just looking at the teacher. In the coffee house classroom a discussion is just so much... it is just so much easier to start. . . . People don’t feel as threatened because of the kind of informality; they can . . . sit where they want. I wish I had the money to bring in cookies and coffee (laughter) for these people this time but . . . still I love that classroom, I want it for my classes, at least once a week, you know, one time a week. We need once in the lab also to work on the writing and the conferencing with the students and the reading of their work, and stuff like that, but during the discussion sessions there is nothing better than that classroom.
Discussion, Implications, Limitations, and Recommendations

Discussion

What do these research results mean? The test for equality of variance indicated that it was necessary to assume unequal variance for all seven tested variables. It shows that on two of the dimensions, Involvement and Satisfaction, the older student group has higher scores than the younger student group. Since there were also slight differences between the coffee house and traditional groups on age composition, it is possible that CUCEI differences between coffee house and traditional classroom settings may be because the two groups differed in age and that the CUCEI differences were not because the coffee house setting worked better than the traditional setting.

The CUCEI results between the control and coffee house classrooms show that out of the seven items scale of Personalization, Involvement, Student Cohesiveness, Satisfaction, Task Orientation, Innovation, and Individuality only three scales prove to be statistically significant. A complete listing of all the CUCEI questions and results can be found in Appendix G.

At a .10 or 90% confidence level there was a significant difference in the scale of Personalization, $\chi^2(2, N = 60) = 3.31, p = 0.025$, and Task, $\chi^2(2, N = 60) = 3.01, p = 0.037$ in favor of the experimental coffee house classroom. The seven CUCEI questions
dealing with *Personalization* resulted in three questions of significance: Question #8- The Instructor talks individually with students ($p = 0.000$), Question #15- The instructor goes of his/her way to help students ($p = 0.02$), and Question #22 The instructor helps each student who is having trouble with the work ($p = 0.04$).

The seven CUCEI questions dealing with *Task* resulted in one question of significance: Question #12- Getting a certain amount of work done is important in this class ($p = 0.02$).

The seven CUCEI questions dealing with *Involvement* resulted in one question of significance: Question #9- Students put effort into what they do in classes ($p = 0.004$).

On the other hand, at a .10 or 90% confidence level, there was a slightly significant student perception difference in the area of *Cohesiveness*, $X^2(2, N = 60) = 2.36$, $p = 0.058$, in favor of the control traditional classrooms A and B. The seven CUCEI questions dealing with *Cohesiveness* resulted in three questions of significance: Question #3- The class is made up of individuals who do not know each other well ($p = 0.02$), Question #10- Each student knows the other members of the class by their first names ($p = 0.02$), and Question #24- Students don’t have much chance to get to know each other in this class ($p = 0.007$).

What might account for these results? The study consisted of a hybrid delivery method where half of the time was spent in the same classroom environment as the control group which could help explain why some of the differences may not have been as pronounced had both sessions of the experimental courses been held in the coffee house classroom setting.
Although the CUCEI was developed for use in small higher education classes of up to 30 students (Fraser & Treagust, 1986; Fraser et al., 1986), the study consisted of a smaller than expected population. The surveys were given during the 14th week of class. On the day the surveys were given there were 32 students in attendance in total in the three ENG111 sections held in the coffee house concept classroom and 31 students in attendance in total in the three traditional classrooms A and B. Upon the completion of the student survey it was determined that the numbers were too small to successfully utilize the ANOVA.

Sixty students in total completed the three ENG111 courses held in the Coffee House Classroom, yet only thirty CUCEI surveys in total were completed by the students from these classes (one student declined to complete a survey). Though the numbers were small they were consistent among all six sections of the courses involved in the study. Part of the low attendance rate may be due to the fact that many of the students knew they were failing the class at the point the surveys were given.

The qualitative faculty interview contained very positive commentary on the use of the coffee house classroom when used in conjunction with the traditional computer/lecture classroom. As stated by the professor teaching the courses involved in the study:

The two settings allowed students the best of both worlds. Holding class in the computer/lecture classroom setting once a week provided students with an opportunity to compose, research and compute in a more solitary and task-oriented environment. Holding class in the coffee-house classroom once a week allowed the students time to discuss, brainstorm and critique together as a group.
Implications

The findings from the study, when reviewed in total, are noteworthy. The following results outline the positive CUCEI response from those students who had classes in the coffee house setting and the strong approval from the faculty who taught in the coffee house classroom:

1) In the gender category, $t$ tests determined that female students scores were significant in the area of Involvement, $\chi^2(2, N = 60) = 2.89, p = 0.049$.

2) In the age category, older students reported significant results in Involvement, $\chi^2(2, N = 60) = 2.97, p = 0.014$, and near significance in the area of Satisfaction, $\chi^2(2, N = 60) = 2.91, p = 0.059$.

3) Both the independent samples $t$ tests and the group statistics $t$ tests indicated a significant student perception difference in the two CUCEI scale areas of Personalization, $\chi^2(2, N = 60) = 3.31, p = 0.025$, and Task, $\chi^2(2, N = 60) = 3.01, p = 0.037$. This is important because of the nature of a small study population.

4) The photographs taken of the two classrooms indicate more student engagement and interaction in the coffee house classroom than in the traditional classroom setting.

5) The observations conducted in the two classrooms, along with the near significant result of Cohesiveness, $\chi^2(2, N = 60) = 2.36, p = 0.058$, in favor of the traditional classroom setting, could indicate that the students in the control classroom formed small groups of students that interacted negatively together.
6) The faculty members teaching in the coffee house classroom reported a high degree of satisfaction with the setting as indicated in the email messages included in Appendix H and the Faculty Experience interview found in Appendix E.

7) The coffee house classroom was scheduled to be dismantled at the end of the spring semester and returned to a traditional classroom. The faculty and the Dean of the School of Liberal Arts and Sciences requested that the room remain intact. The request was granted and, to date, no changes have been made to the room arrangement.

8) The classroom, and its implication to the college, is now highlighted on visitor and guest tours.

These combined results indicate that hybridizing some of the community college courses so that one-half of the sessions are held in the coffee house classroom and one-half of the sessions are held in the traditional computer classroom could be a beneficial delivery practice for the students and the faculty and help contribute to the culture and image of the college and its stakeholders.

Study Limitations

There are several obstacles to overcome when creating a coffee house classroom. One of the first hurdles is providing the community college’s administration and the supporting stakeholders with a clear understanding of the critical nature of the physical classroom’s relationship to a) student success, b) faculty satisfaction, and c) the perceived image of the institutional culture of engaged learning to the community’s business and industry base.
A second challenge involves the funding of the renovation or the outfitting of a learner-centered coffee house concept classroom. No major building renovation was conducted to convert the traditional lecture classroom into the concept classroom. For purposes of this study, the coffee house classroom was outfitted with standard furnishings and equipment that are accessible to any facilities department and are relatively inexpensive for two reasons: a) limited college budgets could make major renovation of the classroom prohibitive or impossible, and b) individual classroom size and layout vary so widely that customizing furnishings specifically for a coffee house classroom would prohibit widespread application; the standardization of the furnishing and equipment increase the possibility of incorporating these concept classrooms into any community college or university setting.

A third concern arises when recreating an existing teacher-centered/traditional classroom into a learner-centered/coffee house concept classroom that challenges most colleges’ mission statements. There are a number of drawbacks to redesigning a classroom from the traditional rows to a spatial arrangement that allows for group interaction and participation. Row seating is a very efficient layout for maximizing valuable and typically limited classroom space. To vary from rows will typically require larger spaces that will seat fewer students. One possible solution stems from the onset of online delivery methods. Large courses that are structured around a faculty member delivering a lecture to a captive audience should be considered as a prime candidate for online or hybrid delivery methods. Removing the lectures out of larger classroom allows the facilities to be restructured to accommodate the greater spatial demands of collaborative learning. The coffee house classroom will contain approximately 28 seats,
which is a reduction when compared to the 36-seat traditional classroom setting. This is a 23% reduction in seating capacity.

A fourth limitation in developing a coffee house classroom lies in its application to those courses where lecture or discussion is the primary method for the delivery of course content. The classroom configuration explored in this study may not be particularly advantageous to courses that require high levels of technology in its content delivery. The coffee house classroom may best serve those courses where technology is limited to research of online resources, presentation display, and data processing.

For this study, only one coffee house classroom was created. The limited class offerings held in the coffee house concept classroom produced a small but what is felt to be an adequate participant sampling.

A sixth limitation lies with the students who will use the room, each of whom has had at least 12 years of sitting in a traditional classroom. It is unknown if the students’ initial impression of the room will heighten or hamper their experiences in the classroom. It is also unknown how the students will use the room. The coffee house classroom design no longer assigns a passive role to the student. All occupants will be expected to participate in discussions and deal appropriately with the differing opinions of their classmates and their faculty. It will be determined if the students have the conflict management skills necessary to interact successfully in this type of environment.

The final obstacle could lie with the faculty. For some faculty, the three-hour lecture in the traditional classroom setting is the way it has always been done and the way it should always be done. To “leave the stage” (King, 1993) might just mean leaving
control and order of the classroom behind, and that is a risk that many faculty might not be willing to take or able to manage.

**Recommendations**

In summary, the findings from a larger student population and faculty pool could clarify the results started in this research. Further advanced research could be focused on:

a) the significant findings from the women in the Baby Boomer and Gen X categories which showed several positive results in favor of the experimental coffee house classroom over the control classroom environment, and b) the faculty who overwhelmingly voiced positive responses to the coffee-house classroom experience.
References


http://www.aacc.nche.edu/


APPENDIX A: PHOTOS OF COFFEE HOUSE AND TRADITIONAL CLASSROOMS

*Figure 14. Coffee House Classroom North View*

*Figure 15. Coffee House Classroom East View*
Figure 16. Coffee House Classroom- South View

Figure 17. Coffee House Classroom- West View
Figure 18. Traditional Classroom A

Figure 19. Traditional Classroom B
APPENDIX B: THE COFFEE HOUSE CLASSROOM DESIGN

Team Problem Solving and Brainstorming

Figure 20. Team Problem Solving and Brainstorming Setting
APPENDIX C: CONSENT TO PARTICIPATE IN RESEARCH

The Coffee House Classroom: The Difference between Student and Faculty Perceptions of Classroom Spatial Design in a Community College Environment

You are asked to participate in a research study conducted by Katherine Kent and Dr. Will Barratt, faculty sponsor, from the Educational Leadership, Administration and Foundations Department at Indiana State University. This study is being conducted as part of dissertation research.

- PURPOSE OF THE STUDY
  Several classrooms within the Liberal Arts Division of the Ivy Tech campus are being evaluated to determine the relationship between classroom spatial design and faculty and student interaction. Surveys will be conducted with the students in these classrooms at the end of the semester. You are in one of the classrooms to be evaluated. Your perception of your experience in this classroom throughout the semester will provide valuable data for the evaluation.

- PROCEDURES
  If you would like to participate in this study you will be asked to complete a survey at the end of the semester entitled the “The College and University Classroom Environment Inventory, or CUCEI. The survey consists of 49 questions requiring strongly disagree to strongly agree responses. The survey will take approximately 15 minutes to complete.

  Your participation in the survey is voluntary and anonymous. You will be asked your age and your gender; you will not be asked your name. There will be no penalty should you decide not to participate in the CUCEI survey.

  If you have any questions or concerns about this research, please contact Katherine Kent at (574) 289-7001 ext. 5402 or kkent@ivytech.edu, or Dr. William Barratt at (812) 237-2869, willbarratt@indstate.edu.

  The Indiana State University Institutional Review Board, irb@indstate.edu, has reviewed and approved this study.

  I understand the procedures described above. My participation in the CUCEI survey constitutes my consent for my data to be used anonymously in the research study. I have been given a copy of this form.

____________________________________________________________________
Printed Name of Subject

____________________________________________________________________
Signature of Subject Date

IRB number #8045, 11/26/07 approval date, 11/04/08 expiration date
APPENDIX D: “THE FACULTY EXPERIENCE” INTERVIEW

(This one-on-one interview will be conducted by the evaluator with the faculty that will teach a course(s) in the “coffee house” concept classroom in order to provide information rich qualitative data to the study. The following are examples of the questions offered to begin the discussion.)

1. Please describe in detail the experience of teaching in the “coffee-house” concept classroom environment.

2. How does your teaching experience in the “coffee-house” classroom compare to other courses you have taught in traditional classroom settings (if applicable).

3. Was the classroom environment able to support the activities you require for the course, in particular group problem solving/interaction and experiential learning?

4. Did you feel the students in your class
   a. developed relationships with yourself or the other students? Why?
   b. interacted successfully? Why?
   c. felt a sense of belonging to a learning community? Why?
APPENDIX E: THE FACULTY INTERVIEW

The following is the transcription of the interview between Katherine Kent, Primary Investigator (PI), and John Comeau (JC), ENG111 Professor of the six ENG111 courses involved in the study at Ivy Tech Community College. The interview was 19 minutes in its entirety.

PI: This is Thursday, May 8\textsuperscript{th}, 2008, at approximately 10:42am and the following is an interview with John Comeau, an English instructor (professor) with Ivy Tech Community College. First I want to thank you for participating in this study. Over the past semester you have taught six sections of ENGIII, English Composition. Three of these courses were held entirely in computer labs; three of the courses were divided with one session a week held in the coffee house classroom and one session held in the computer lab. So I am going to ask you questions about your perception of the experiences with these classes.

Okay, please describe your perception of teaching in these two different settings; the computer lab only and the mixed coffee house/computer lab. Did you experience any differences?

JC: (laughter) It’s always difficult to talk when you are being recorded, a bit awkward.

PI: I know, just pretend it is not there.
JC: In my class there is a mixture of discussion and writing. We have to have discussions in order to kind of generate the ideas that people can write about, to make the kind of connections and the kind of clarifications that, that they need to see in order to do this kind of academic writing that is required in ENG111. In the traditional classroom, where everybody is facing the teacher, starting a discussion is often times kind of a daunting thing because everyone seems to be just looking at the teacher. In the coffee house classroom a discussion is just so much… it is just so much easier to start. I mean, people don’t feel as threatened because of the kind of informality; they can kind of sit where they want. I wish I had the money to bring in cookies and coffee (laughter) for these people this time but…like I used to, but still I love that classroom, I want it for my classes, at least once a week, you know, one time a week. We need once in the lab also to work on the writing and the conferencing with the students and the reading of their work, and stuff like that, but during the discussion sessions there is nothing better than that classroom, I think. You know?

PI: Good. Did you feel that there was any kind of differences between the two classes as far as the students interacting with each other, relationships that were developed? Was there any of that?

JC: Well, you mean between the classes that met exclusively, or sometimes in there and sometimes in there?

PI: Yes

JC: Okay, the geography of a class really does influence how it develops, how it develops between the teacher and students, between students and students. The students
that met in the lab tend to develop their own little nationalities; based on whatever particular continent they live on. You know?

PI: (laughter) Because of the islands they were sitting in, in each little pod?

JC: Yeah, Yeah They developed a kind of a, like I said, a national consciousness, it seems like, a lot of time, that sometimes is kind of useful when you are doing peer review and stuff like that to have people sitting in groups like that. The… where was I going though with that… I think that isn’t as good, I think, for discussion, you know, especially with all of the computer distractions available, you know? I mean there are people that will kind of withdraw and do other things rather than get involved in the discussions. Like I said, I like the… your classroom, for whenever we have to meet to talk about stuff.

PI: I did notice on a couple of occasions I went in and just kind of took a snapshot of where they were in time. It seemed in the coffee house classroom there was more attention on you, there were faces looking at you. This is just from this observation of a photograph. In the computer lab there were more looking at computer screens….

JC: That does not surprise me.

PI: I don’t know if that was an issue.

JC: Well, it’s not an issue with me if it is not an issue with them. You know what I mean? Ultimately what they have to do is come up with twenty pages of revised text and if they can do that playing on the computer that’s OK with me. You know, I mean if, although like I say, I like people to get involved with the discussions. You know, when you are talking about stuff, when you are on kind of like the edge of your thought that talking in class often times involves, often times you can just see it, the light bulb goes
on. You know what I mean? People will get the idea; that is what it always takes to write, you have to have at least a flash of that light bulb. You know what I mean? And you can see that in the discussions, you know what I mean? That’s why I have discussions, to generate those kind of light bulb moments. Like I say, if people elect not to participate they can do that, well, they can do that in the coffee classroom too, they can sit in the back or they can sit at their table and draw if they want. It’s not quite as inviting, I suppose, as the computer as a distraction. Like I say, I like the coffee shop classroom. That’s the best classroom in kind of organization, the best classroom that I have ever seen for discussions and stuff where you get people talking.

PI: Great. Anything else you want to….you kind of mentioned that you have taught, in the past, in the traditional row-upon-row and…..

JC: You know, you can do it, I mean if you have to, you can call out names if you have to, you know what I mean, to get people talking. But, it doesn’t go as easily. You know what I mean? The informality of the class exactly conveys the kind of informality that I want to lead to the discussions. It’s not like a classroom where they are just trying to get the right answer; they are trying to share their thoughts and kind of develop them; get their oar in the water.

PI: I did hear from one instructor. He thought the students might be a little too sloppy and that they had their feet up and they weren’t sitting up straight and that was a concern. Did you experience that?

JC: Who was that Miller? (laughter). I don’t know, to me I want people to be comfortable in my class. You know, I think that making them sit on nails is not a necessarily a good thing. (laughter)
PI: So you did not experience that problem?

JC: No (laughter)

PI: Okay, I think that is all I had. You have addressed everything. Any parting words?

JC: Yes, and this is on the record. I think that you did a wonderful job on that room.

PI: Oh, thank you.

JC: And I am a real fan of it, like I said, and I want to use it for all my classes.

PI: Okay, well great and thank you so much for your participation and your words.

JC: Okay.
APPENDIX F: ENG111 COMPLETION DATA

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<th>Total # Students</th>
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<th>Total # Finished</th>
<th>Total % Finished</th>
<th>Total Passed</th>
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## APPENDIX G: CUCEI RESULTS

Table 7

CUCEI Results between the Control and Coffee House Classrooms

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<th>Stand. Dev.</th>
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<tr>
<td>1</td>
<td>The instructor considers students’ feelings</td>
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<td>3.16</td>
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<td>32</td>
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<td>8</td>
<td>The instructor talks individually with students.</td>
<td>Control</td>
<td>31</td>
<td>3.03</td>
<td>0.61</td>
<td>0.00***</td>
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<td>The instructor goes out of his/her way to help students</td>
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<td>31</td>
<td>2.90</td>
<td>0.79</td>
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<td>The instructor helps each student who is having trouble with the work</td>
<td>Control</td>
<td>31</td>
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<td>Coffee</td>
<td>31</td>
<td>2.97</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>The instructor isn’t interested in students’ problems</td>
<td>Control</td>
<td>31</td>
<td>2.90</td>
<td>0.60</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coffee</td>
<td>32</td>
<td>3.16</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>The instructor is unfriendly and inconsiderate towards students</td>
<td>Control</td>
<td>31</td>
<td>3.48</td>
<td>0.63</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coffee</td>
<td>32</td>
<td>3.53</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>
Table 7 continued:

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Control</th>
<th>Coffee</th>
<th></th>
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<tbody>
<tr>
<td>2</td>
<td>The instructor talks rather than listens</td>
<td>31</td>
<td>2.58</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>2.78</td>
<td>.71</td>
</tr>
<tr>
<td>9</td>
<td>Students put effort into what they do in classes.</td>
<td>31</td>
<td>2.84</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>3.25</td>
<td>.44</td>
</tr>
<tr>
<td>16</td>
<td>Students ‘clockwatch’ in this class.</td>
<td>31</td>
<td>2.52</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>2.29</td>
<td>.82</td>
</tr>
<tr>
<td>23</td>
<td>Students in this class pay attention to what others are saying.</td>
<td>31</td>
<td>3.26</td>
<td>.514</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>3.16</td>
<td>.57</td>
</tr>
<tr>
<td>30</td>
<td>Students seldom present their work to the class.</td>
<td>30</td>
<td>2.33</td>
<td>.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>2.34</td>
<td>.83</td>
</tr>
<tr>
<td>37</td>
<td>There are opportunities for students to express opinions in this class.</td>
<td>31</td>
<td>3.45</td>
<td>.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>3.56</td>
<td>.62</td>
</tr>
<tr>
<td>44</td>
<td>The instructor dominates class discussions</td>
<td>31</td>
<td>2.65</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>2.81</td>
<td>.93</td>
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<table>
<thead>
<tr>
<th>Student Cohesiveness</th>
<th>Control</th>
<th>Coffee</th>
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<tbody>
<tr>
<td>3</td>
<td>The class is made up of individuals who don’t know each other well.</td>
<td>30</td>
<td>2.23</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>1.77</td>
<td>.76</td>
</tr>
<tr>
<td>10</td>
<td>Each student knows the other members of the class by their first names.</td>
<td>31</td>
<td>2.03</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>1.81</td>
<td>.74</td>
</tr>
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Table 7 continued:

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<thead>
<tr>
<th></th>
<th>Description</th>
<th>Control</th>
<th>Coffee</th>
<th>p-value</th>
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<tbody>
<tr>
<td>17</td>
<td>Friendships are made among students in this class.</td>
<td>31</td>
<td>32</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.55</td>
<td>2.47</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.62</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Students don’t have much chance to get to know each other in this class.</td>
<td>29</td>
<td>32</td>
<td>0.007**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.66</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.55</td>
<td>0.81</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>It takes a long time to get to know everybody by his/her first name in this class.</td>
<td>31</td>
<td>32</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.19</td>
<td>2.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.60</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Students in this class get to know each other well.</td>
<td>31</td>
<td>31</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.42</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.50</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Students in this class aren’t very interested in getting to know other students.</td>
<td>31</td>
<td>32</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.42</td>
<td>2.44</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.67</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The students look forward to coming to classes.</td>
<td>31</td>
<td>31</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.55</td>
<td>2.75</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>0.76</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Students are dissatisfied with what is done in the class.</td>
<td>31</td>
<td>32</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.74</td>
<td>2.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.68</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>After the class, the students have a sense of satisfaction.</td>
<td>31</td>
<td>30</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.52</td>
<td>2.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.72</td>
<td>0.59</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Classes are a waste of time.</td>
<td>30</td>
<td>32</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.33</td>
<td>3.44</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.48</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Classes are boring.</td>
<td>31</td>
<td>32</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.58</td>
<td>2.53</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>0.72</td>
<td>0.92</td>
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Table 7 continued:

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Control</th>
<th>Coffee</th>
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</thead>
<tbody>
<tr>
<td>39</td>
<td>Students enjoy going to class.</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.55</td>
<td>2.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.51</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Classes are interesting.</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.81</td>
<td>2.88</td>
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<td></td>
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<td>0.60</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Task Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Students know exactly what has to be done in our class.</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.71</td>
<td>3.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.97</td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Getting a certain amount of work done is important in this class.</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.10</td>
<td>3.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.75</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.02*</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>The group often gets sidetracked instead of sticking to the point.</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.53</td>
<td>2.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.68</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>This is a disorganized class.</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.97</td>
<td>3.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.62</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Class assignments are clear so everyone knows what to do.</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.52</td>
<td>2.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.85</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>The class seldom starts on time.</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.84</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.78</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Activities in this class are clearly and carefully planned</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.68</td>
<td>2.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.75</td>
<td>0.64</td>
</tr>
</tbody>
</table>
Table 7 continued:

|   | Innovation                                                                 | Control  |  |  |  |
|---|---------------------------------------------------------------------------|----------|  |  |  |
| 6 | New ideas are seldom tried out in the class.                               | 31       | 2.74 | 0.77 | 0.56 |
|   |                                                                           | 32       | 2.63 | 0.79 |     |
| 13| New and different ways of teaching are seldom used in this class.          | 31       | 2.71 | 0.74 | 0.21 |
|   |                                                                           | 32       | 2.47 | 0.76 |     |
| 20| The instructor thinks up innovative activities for students to do.         | 31       | 2.39 | 0.67 | 0.14 |
|   |                                                                           | 32       | 2.69 | 0.90 |     |
| 27| Teaching approaches in this class are characterized by innovation and variety | 31       | 2.68 | 0.60 | 0.26 |
|   |                                                                           | 31       | 2.84 | 0.52 |     |
| 34| The seating in this class is arranged in the same way each week            | 31       | 2.84 | 0.74 | 0.22 |
|   |                                                                           | 30       | 2.57 | 0.97 |     |
| 41| The instructor often thinks of unusual class activities                    | 31       | 2.13 | 0.43 | 0.64 |
|   |                                                                           | 32       | 2.06 | 0.67 |     |
| 48| Students seem to do the same type of activities every class               | 31       | 2.45 | 0.51 | 0.93 |
|   |                                                                           | 32       | 2.44 | 0.72 |     |

<p>|   | Individualization                                                         | Control  |  |  |  |
|---|---------------------------------------------------------------------------|----------|  |  |  |
| 7 | All students in the class are expected to do the same work, in the same way and in the same time. | 31       | 2.55 | 1.03 | 0.69 |
|   |                                                                           | 32       | 2.66 | 1.07 |     |
| 14| Students are generally allowed to work at their own pace.                  | 31       | 3.03 | 0.55 | 0.32 |
|   |                                                                           | 31       | 3.19 | 0.70 |     |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Control</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Students have a say in how class time is spent.</td>
<td>31</td>
<td>2.77</td>
<td>0.67</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30</td>
<td>2.50</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Students are allowed to choose activities and how they will work.</td>
<td>30</td>
<td>2.33</td>
<td>0.61</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>2.53</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Teaching approaches allow students to proceed at their own pace.</td>
<td>31</td>
<td>2.94</td>
<td>0.51</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>3.13</td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>There is little opportunity for a student to pursue his/her particular interest in this class</td>
<td>31</td>
<td>2.52</td>
<td>0.63</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32</td>
<td>2.59</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>It is the instructor who decides what will be done in our class.</td>
<td>31</td>
<td>1.90</td>
<td>0.47</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>1.84</td>
<td>0.69</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p \leq .05, **p \leq .01, ***p \leq .001
From: Katherine M. Kent  
Sent: Thursday, January 10, 2008 10:52 AM  
To: Craig Parmley; John M. Comeau; Dena Counts; 'fzink@ivytech.edu'; 'bbaunoch@ivytech.edu'  
Cc: James R. Powell; Beth Ann Green  
Subject: Room 2221  
Hello Communication Faculty,

Room 2221 is undergoing a change for the spring semester. The room will be outfitted with a variety of furnishings and equipment in the hopes of replicating a “coffee-house-like” setting; a place where students can choose from an array of seating options and corresponding conversation styles. The room has been given the seal of approval for drinks and eats (as long as it stays neat and spills are kept to a minimum) in keeping with the notion that good discussion needs sustenance. With your permission, students may bring covered beverages and snacks to class. A small cart with napkins, plates and clean-up supplies will be provided.

Though the focus of my study is geared toward the ENG111 courses, I want to thank all of you for allowing this study to take place in your classroom. I would also like to thank those of you that have provided input into the design and layout of the space. I hope that you find the room flexible enough to accommodate your course activities. I expect a few tweaks will be needed to set the stage for good discussion, so please let me know if you have any questions or concerns. I am very interested in your feedback, both positive and negative, throughout the semester. I can be reached at kkent@ivytech.edu or ext. 5402.

Here’s to the start of terrific New Year! Kathy

From: Katherine M. Kent  
Sent: Thursday, January 10, 2008 10:52 AM  
To: John M. Comeau  
Cc: James R. Powell  
Subject: Room 2221
Hello John,

As luck has it, you are the sole faculty member directly involved in my dissertation study. You have now become my best friend :) Here’s the scenario, let me know if you object or want a revision:

You are currently teaching six sections of ENG111 this spring:
Three sections are scheduled to be taught solely in a computer lab. These are the control classes:

ENG111-26 MW 1:00 – 2:15
ENG111-29 TR 1:00 – 2:15
ENG111-51 M 6 – 8:45

Three sections are scheduled to be taught in Room 2221 (coffee house classroom) on Mondays & Tuesdays and in a computer lab on Wednesdays & Thursdays.

ENG111-01 MW 8:30 – 9:45
ENG111-04 TR 11:30 – 12:45
ENG111-19 MW 11:30 – 12:45

With your approval, I plan on attending the first session of each of these 6 classes to do a quick run through of the IRB consent form and to let the class know that they are involved in a study. I will then stay out of your classroom until sometime around the 12th session at which time I will conduct the evaluation (hopefully at the same time the students are filling out your SUMMAs so as to disturb as little as possible). I plan on calling you from time-to-time to see if we need to do any reconfigurations of the space and determine how it’s going.

If these arrangements are “OK” with you, please let me know when you would like me to show up for the IRB blurb. If you have ANY concerns, please let me know. (I’ll try to track you down after the room has been reconfigured.) Thanks again!

From: Frank Zink
Sent: Thursday, January 10, 2008 10:52 AM
To: Jim Powell
Cc: Katherine Kent
Subject: Room 2221

I just received the word from Kathy Kent on what is going on in room 2221.
I am glad Ivy Tech is catching up with me. This was the way my classroom was set up (without a servin tray, however) at Michigan State, 1968-70, and Bethel College, 1970-1975. Some of my classes at St. Mary's-Notre Dame were also taught in a similar environment in the 1970's and 1980's. The new environment in 2221 will be especially helpful for learning in Com 102 - Interpersonal Comm. As long as there is a lectern in the room it will also be acceptable for Com 101 - Public Speaking I believe.
I look forward to teaching in this environment.

Kathy mentioned that this is a "study". If the study is about student learning in a friendly context/environment that was done in the 1960's and 1970's, and implemented by M.S.U. in the late 1960's because of the positive results.
I have pushed for this everywhere I have taught. At Ivy Tech I had to fight to get moveable chairs in that classroom because the horseshoe or circle set-up, with students facing each other rather than looking at people’s backs, adds to the learning experience. My best wishes go out to Kathy and her study.

Cordially,

Frank L. Zink
Adjunct Prof., Speech and Human Communication

From: Frank Zink
Sent: Thursday, January 10, 2008 12:31 PM
To: Jim Powell
Cc: Katherine Kent
Subject: R 2221

Kathy:

Good luck with your study. I’d be glad to know if you are doing some research on learning environments, and would be more than willing to have my Com 101 and Com 102 class results contribute to your statistical analyses.

Quick question: how many students will the new set-up accommodate? I have up to 30 in Com 102 and 25 in Com 101. Thanks.

From: Katherine Kent
Sent: Thursday, January 10, 2008 6:22 PM
To: Frank Zink
Cc: Jim Powell
Subject: R 2221

Thank you Frank (I was worried you might not like it!) The classroom should now hold 30 students.

I would love to have your feedback throughout the semester. I’ll give you a call in the next couple of weeks to see how it is working out for you.

From: Frank Zink
Sent: Friday, January 11, 2008 12:46 PM
To: Katherine Kent
Cc:
Subject:
Hi, Kathy...

Anything I can do to be of help. Learning environments are important and most classrooms from K thru Grad School are about as anti-learning as imaginable. Jesus taught in the open air... I did a lot of that at Ancilla College under the trees! My educational guru is William Glasser (Schools Without Failure etc.) who argues for the circle with the teacher in the midst of the learners interacting with them. I had a small room at Bethel with living room environment for my upper-level classes and seminars. It was a motivation for the students to qualify to be in there as upper-level people! Now Bethel has a log cabin...

   Good luck with your study!

   Frank

From: Katherine M. Kent
Sent: Thursday, January 28, 2008 10:52 AM
To: Craig Parmley; John M. Comeau; Dena Counts; 'fzink@ivytech.edu'; 'bbaunoch@ivytech.edu'
Cc: James R. Powell; Beth Ann Green
Subject: Room 2221

A Fine Art Faculty member stated that a student had mentioned there were not enough side arms on the upholstered seating pieces to accommodate writing tasks. On Monday, January 28th, four lapdesks were purchased and placed in the room for student usage.

From: Dena Counts
Sent: Tuesday, January 29, 2008 11:52 AM
To: Katherine Kent
Cc: Craig Parmley; James R. Powell
Subject: Coffee House Classroom

Hello Communication Faculty,

   We are now heading into week three. I would appreciate your feedback, positive and/or negative, in regards to the “Coffee House Classroom”.
   -Is the room working for the conditions of your class?
   -Are any adjustments or reconfigurations necessary to make the room more efficient or conducive to your class activities?
   -Could you comment on the interaction or engagement occurring in the classroom between students and between yourself and the students?

   Any additional comments you have would be appreciated. Again my thanks for your participation in this study! Kathy
Things are going great Kathy. Could we get a coffee maker? My students would love one. If not, I’ll try to scrounge one up.

Dena Counts  
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Ivy Tech Community College  
South Bend, Indiana  
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SQ themes: Belief - Responsibility - Communication - Activator - Strategic

"Few men during their lifetime come anywhere near exhausting the resources dwelling within them. There are deep wells of strength that are never used." Richard E. Byrd

From: Katherine Kent  
Sent: Tuesday, January 29, 2008 11:52 AM  
To: John Comeau  
Cc: Jim Powell  
Subject: Coffee House Classroom

Hi John,

I was wondering if we might meet for a quick discussion session to see how the “coffee house” arrangement is working out for your classes. It should not take more than 10 minutes.

Do you have any time within the next few days that is good for you?

Thanks, Kath