Are millennials addicted to the “blinking cursor?” Is there still room for the “Sage on the Stage?” Is technology enhancing or taking away from the classroom experience? Are we as educators fully embracing the capabilities of the new technologies? What can the millennials teach faculty and how can faculty better reach them? Will Text, Twitter and Podcast replace the classroom as we know it and if so are we prepared for the change?
Text, Twitter & Podcast: Reaching the Millennials

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Juried Paper Presentations

“A Cell in a Honeycomb”
The Development of the Modern Office
Ronn Daniel
James Madison University

In 1853, novelist Herman Melville published the remarkable story of a defiant office clerk named Bartleby the Scrivener. Typical for his day, and for generations of clerks and merchants preceding him, Bartleby’s workspace was a tiny office – a single room, dimly lit by two windows, divided in half by glass folding doors, and filled haphazardly with high-slanted desks, pigeon-hole cubbies, ink pots, and candles. Inside the room worked four men and an office boy.¹

In 1892, Effie Jones, a young single woman, left her family’s farm in Iowa to find work in a Chicago law office. “Every desk in this office is connected with electric bells and speaking tubes with every other desk, and I would be in one room writing away for dear life [taking shorthand dictation for typing], and would hear my bell going.”² Had Effie’s fortunes been different, she might just as easily have found clerical work in the mail-order processing department of Sears, Roebuck, & Company a few blocks away. There she would have shared a room with as many as 200 other women, all pounding typewriter keys, and working not from shorthand, but rather off pre-recorded graphophone wax cylinders. Effie’s workday would have commenced promptly at 8am with the flash of a time-signal, her finished letters would have each been time-stamped, and her performance measured in keystrokes per minute.

With Bartleby and Effie as our yardsticks, it is possible to observe how radically the configuration of the American office changed in the second-half of the nineteenth century. During that period the office ceased to be a small one or two-room space squeezed into a merchant’s warehouse or residence, and became instead one “cell”³ among hundreds in new high-rise office towers filling American cities. Young women typists replaced black-suited Victorian clerks; their typewriters, adding machines, and file cabinets replacing the men’s now obsolete copy-books, metal spikes, and pigeon hole cubbies.

While the transformations in office space and organization were immense and pervasive, they were also contested. Victorian moralists condemned the presence of young women in the manly public arena of merchants and professionals. Male clerks resisted the deskilling of their trades. New middle-managers


deployed fashionable scientific theories and novel machinery to regulate and discipline the armies of new workers and the “paper empires.”

In her recent book *The Modern Interior*, design historian Penny Sparke provocatively enlarges our definitions of the modern interior. Sparke conceives of the modern interior not as a moment of stylistic coherence, but rather—regardless of style—as episodes and encounters with the lived experience of modernity. The modern interior was for her a place where the disorienting rush of life in the industrial age—a life overflowing with mass communications, manipulated consumer desires, cheap industrial goods, and social fragmentation of the large metropolis—was both embodied and negotiated.

In that spirit, this paper addresses the development of the corporate office as an example of modern spatial experience. Through an examination of furnishings, mechanical devices, shifting and contested gender roles, management ideologies, and spatial configurations, the paper describes the emergence of this new modern typology.

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Alfred Stieglitz, “Old and New New York” (1910)
“Early Use of Boorum & Pease Ledgers” (c. 1850)

“Order Entry Department, Sears, Roebuck & Co., Chicago, IL.” (c. 1913).

Works Consulted


Leffingwell, W.H. *Scientific Office Management: A report on the results of the applications of the Taylor System of Scientific Management to offices supplemented with a discussion of how to obtain the most important of these results.* Chicago & New York: A.W Shaw Company, 1917.


Abstract

Research on Millennial learners in post secondary education suggests that sound pedagogy developed for this group must address their unique learning styles, which are impacted by attention span and technology use. Texting, twittering, online or on a cell phone, the current crop of students show an inability to utilize traditional models of learning. This study asserts that the structure of the design studio learning model complements the learning styles of the Millennials by providing a format in which they construct their learning through the design process as they progress through the curriculum of an interior design program. The design studio model guides the Millennial student beyond simple acquisition of information to higher levels of learning.

Learning Process/Constructivist Theory

Learning can be defined as an internal process that is different for individuals and is determined to be the act, process, or experience of gaining knowledge or skill (de Haan & de Ridder, 2006). Constructivist learning theory describes how learning happens based on the idea that learning and knowledge come from experience. The experience is internalized and creates a framework of understanding. As a result, students inherently develop a sense of identity based on what and how they have learned. The background and culture of the learner help to shape the knowledge and truth the learner creates, discovers, and attains throughout the learning process (Wertsch 1997). Student input directly affects the student outcome; how the student learns is just as
important as the environment in which the student learns. Learning follows an active process where learners discover principles, concepts, and facts for themselves, hence the importance of encouraging trial and error as well as intuitive thinking in learners (Ackerman, 1996). For learners the reality of knowledge is discovered through the social invention of learning. Kukla (2000) argues that reality is constructed by our own activities and that people, together as members of a society, invent the properties of the world. Does the design studio model and its constructivist environment complement or detract from the learning styles of the Millennials?

**Design Studio Model**

The K-12 experience of the Millennials has prepared them to acquire knowledge through task completion and testing. The design studio model is focused on learning as active participation in the creation of knowledge. Millennials prefer interactive learning as evidenced by their devotion to the technology in their lives. The design studio model promotes an environment that allows for a dialogue between instructor and student. Learning takes place between the two entities as a back and forth process of information exchange through critique. Holt and Willard-Holt (2000) developed the concept of dynamic assessment, which is a way of assessing the true potential of learners that differs significantly from conventional tests. Here the essentially interactive nature of learning is extended to the process of assessment. Instead of viewing assessment as a process carried out by one person, such as an instructor, it is seen as a two-way process involving interaction between both instructor and learner. This interaction works well with Millennial learners as they have the expectation that the design studio is student focused, rather than teacher focused (Okagaki, Lynn, Helling, M.K. & Bingham, G.E., 2009). The role of the assessor becomes one of entering into a dialogue with the students being assessed to find out the current
level of performance on a task and sharing with them possible ways in which that performance might be subsequently improved. Again, Millennials expect and find this individualized approach in the design studio (McGlynn, 2005). Assessment and learning are seen as inextricably linked and not separate processes (Holt & Willard-Holt, 2000). Design studio instructors use this dynamic assessment as a continuous and interactive process that measures the achievement of the learner, the quality of the learning experience, and the courseware design. The feedback created by the assessment process serves as a direct foundation for further development.

**Empirical Research: Methodology**

First year design students will be tested to identify their type of learning style using an index of learning style questionnaire. This questionnaire was created for first year college students at the University of North Carolina by Barbara Soloman and Richard Felder (http://www.engr.ncsu.edu/learningstyles/ilsweb.html). The questionnaire is based on four pairs of learning styles that define the learning type of the student. The four pairs are: active/reflective learners, sensing/intuitive learners, visual/verbal learners and sequential/global learners. A second survey which will be given to the students is a revised version of the 2009 Freshman Survey developed by the Cooperative Institutional Research Program at the Higher Education Research Institute. The survey was developed to gather demographic data and attitudinal trends. Modification of the questionnaire will provide additional data about the students’ level of cognitive development. The study will utilize the levels of learning in Bloom’s Revised Taxonomy of Learning, which identify learning hierarchies in three domains: cognitive (knowledge), affective (attitude), and psychomotor (skills) (Anderson, L.W. & Krathwohl, D.R.,
Analysis of variance (ANOVA) tests will be conducted in order to determine if students’ learning is affected by the design studio model as they progress through the interior design program. Does the design studio model affect the cognitive development of Millennial students by utilizing their unique learning styles? The first preliminary study seeks to identify variables and data that can be used in the longitudinal study that will be conducted over the course of the next four years. The sample is comprised of 2009-2010 academic year students enrolled in the Department of Clothing, Textiles and Interior Design at the University of Alabama. The students that participate will be followed through each year of the program in a studio course.

**Expected Outcomes**

Research will identify individual variables or initial known values, which will be used for comparison with later data. The influence of attention span and technology on the Millennials seems to preclude the effective use of the read/lecture/exam model accepted as the platform for intellectual development in higher education. The structure of the design studio learning model seems to support the learning styles of the Millennials and could provide insight into this group of learners for other disciplines. This research will provide the basis for an exploration of the relationship between the experiential learning model that is practiced in the design studio model and the cognitive development of Millennial students.
References


Juried Paper Presentation

*Design is Not an Apple:*

*An Abductive Alternative to Atomistic Design Definition*

Hannah Mendoza
UNC Greensboro
Importance and Relevance:

Students need cross-cultural learning experiences to respond to our global economy. If we are concerned about a future for the world, global education must be a priority in our schools (Wilson, 1982). An important goal of higher education is to prepare culturally competent individuals with the ability to work effectively with people from different backgrounds (Smith & Schonfeld, 2000). Experiential learning in the curriculum is also valued. Experiential learning or internships are touted as being an important component of education (Marlin Bennett, 2002). Therefore, both cross-cultural and experiential learning are significant. ID programs include internships and experiential learning, however, “real life” design or internships are rarely combined with international experiences. Practical challenges with managing cross-cultural projects may be clarified with this combination and this could further inform teaching about practice in the global arena.

Purpose and Methodology:

A case study approach was used to explore a unique global learning opportunity. The question: What are the challenges associated with international practice? This study also explored impacts on teaching for practice across cultures. The experiential process informed both faculty and students regarding what theory does not tell us about international practice.
A land grant university planned to redesign a portion of a palace in Italy in order to accommodate twenty students in a semester abroad program. During discussions with administration it was decided to make this a collaborative experiential learning opportunity for ID students and faculty with "value added" research possibilities.

What were challenges discovered while completing a cross-cultural project in the real world? Specific challenges: A spoken and written language barrier, time differences between Italy and the United States, translation of different measurement and monetary systems, and discovering quality product suppliers in a foreign country. There was also a balancing act between respecting the history of an Italian palace while meeting the demand for a comfortable, flexible, functional, and safe environment for contemporary students studying abroad. Other challenges: A short time for project completion, limited budget, and travel to and around Italy to work with architecture and craftspeople from another culture. This design project was rich with problem solving experiences rarely available for university teaching when projects do not reach across international borders and include experiential learning.

Participants in this study: Decision makers were from the United States and Italy. These included the dean in the US and administration in Italy. Design, construction, and supply teams were also from the US and Italy. Two interior design faculty members and two senior ID students, from the US, were permanent design team members. Ten US ID students studying in Italy were temporary team members while other students from the study abroad program were enlisted to determine user requirements. Other team members included the Italian school staff, a designer in Italy, and Italian craftspeople.

Students and faculty debriefed on problems and solutions. Learning and creative problem solving occurred and implications for future teaching about international practice emerged. This paper will share challenges encountered, solutions applied, and implications for teaching.
References


Juried Paper Presentation

Testing the Impact of E-light Learning Modules
Tina Sarawgi
UNC Greensboro

Testing the Impact of E-light Learning Modules in Introducing Photometrically Accurate Lighting Simulation Methods in the Undergraduate Interior Design Curriculum

Background

This paper discusses the assessment of e-light, an interactive multimedia interface, among third year students in an interior lighting design class. E-light was developed to introduce photometrically accurate lighting simulation methods in the lighting design process.

With the proliferation of computers in design schools there is no doubt that the students are becoming well-versed in digital visualization. Yet most do not understand the lighting performance of their designed spaces. More often than not, lighting design is not integrated into the design process, but tagged in at the end of the project to generate attractive renderings.

Today, lighting design software tools have improved considerably in their accuracy and graphical user interface. They allow designers to iteratively explore different scenarios related to lighting, producing graphics and reports that help examine, compare and communicate them. The probability of the efficient use of electric light and daylight could be higher when lighting solutions are rigorously investigated through such tools in the design process. However, it is unfortunate to find that only 42.9% of interior design educators use lighting design software in their lighting design related courses (Sarawgi, 2006). E-light was designed to address this shortcoming. The purpose of e-light is three-fold: to demonstrate the capabilities of lighting design software, encourage interior designers to design using
photometrically sound lighting software tools, and to integrate lighting in the overall design process.

Figure 1 shows a screen capture of e-light.

![e-light multimedia interface](image)

**Figure 1.** The e-light multimedia interface.

E-light is built on the premise that all lighting design software programs are based on global illumination algorithms (Rea, 2000). If these software concepts were suitably linked to lighting design concepts, designers would feel less intimidated in using the programs and can include them in their design and analysis processes. E-light is thus divided into three main components with topics hyperlinked to one another: lighting concepts, software concepts, and lighting application as shown in Figure 2. The lighting concepts module provides fundamental knowledge on lighting to conduct lighting simulation. For example, lighting design guidelines, lighting metrics, different lighting distribution systems, etc. The software concepts module discusses the related computer model settings, and material assignment...
techniques, and luminaire selection and application to conduct lighting simulation with the current state of technology. The lighting application module demonstrates the application of knowledge from the previous two modules for specific lighting tasks.

Figure 2. The diagram shows the three principal components of the project.

Assessment

E-light was tested in Spring 2009 in an interior lighting design class at the University of North Carolina at Greensboro. During the assessment, all 42 students in the interior lighting design class worked on the same project: a shelter for teenage mothers. A basic 3D model of the project was provided to the students. Each student detailed the interiors, defining materials and adding furniture, fixture, and equipment in the space. The students were expected to produce qualitative (photorealistic renderings) and quantitative (photometrically accurate illuminance calculations) lighting design solutions in a week. The class was divided into three groups: (a) group one received e-light, (b) group two received demonstration on software use by the instructor, and (c) group three received both e-light and demonstration on software use. The students were also guided towards software user guides and tutorials, and the instructor spent an equal amount of time with each group in class. The hypothesis put forward to test was that e-light would be useful as a supplementary tool to classroom discussions and demonstrations, thus extending student learning. The research questions framed were:
1. How effective is e-light in enhancing student’s understanding of lighting design software to generate qualitative and quantitative lighting simulations. Is it effective as a supplementary tool of instruction?

2. What conditions may influence the effectiveness of e-light?

Results and Observation

The qualitative and quantitative lighting design simulations generated by the students at the end of the week were analyzed as the task-based learning outcomes of the study. See Figures 3 and 4 for lighting simulations generated by the end of the week of testing. In addition, questionnaires were administered to the students to assess their perception of the helpfulness of e-light for the assignment.

Figure 3: Examples of photometrically accurate renderings of interior space of the shelter conducted during the week of testing (Students: Megan Weatherly, Caroline Vickery, Lynnet Sprague, Lauren Goodrum).
Overall, the lighting simulation results show that students in group one, who received only e-light, performed significantly better compared to the other two groups as illustrated in the graph in Figure 5.
Figure 5. *E-light* assessment results in the interior lighting design class.

About 50% of students from group one (group that received only *e-light*) were able to perform photometrically accurate lighting design calculations adequately as opposed to 35.7% of students from group two who only attended the demonstration by the instructor. It is also pertinent to note that the students from group one performed significantly better in generating photorealistic renderings compared to the other two groups. Performance of students who received both *e-light* and demonstration was the least satisfactory of all.

The questionnaire revealed that the students in the two groups that received demonstration by the instructor (groups two and three) did not adequately refer to other resources that were provided to them. This could be attributed to the fact that these students were passive consumers of information in a lecture room, who were not actively engage in seeking solutions to the given assignment (Veronikas...
and Shaughnessy, 2004). These students were satisfied with the classroom explanation; they did not take the initiative to explore other resources provided to them to perform lighting simulations.

A recent report by the US Department of Education supports this finding (US Department of Education, 2009). This report discusses results from a meta-analysis comparing online learning conditions with face-to-face instruction which revealed that learning outcomes for students who engaged in online learning exceeded those of students receiving face-to-face instruction, the results being statistically significant. Interactive tools like e-light can give learners control of their interactions with the media, allowing self-monitoring, and prompting learner reflection thus promoting student-centered learning. The author also found during the course of the testing and through the questionnaire that students using only e-light formed a community of learners, helping each other out.

Discussion

E-light was intended as a supplementary tool to learn lighting design software. The study started with the hypothesis that the students who receive both e-light and demonstration would perform better than the other two groups. However, since group one performed significantly better than groups two and three, it could be concluded that e-light can be used as a standalone tool as an alternative tool to classroom demonstration and learning. However, the results of this study should be viewed in light of the following scope and limitations:

1. The results are based on a single testing and a small sample size. More testing of e-light needs to be done to determine if tools like e-light can improve student’s comprehension of lighting simulation tools.
2. The study could have a potential bias due to the fact that the author served the roles of *e-light* author, instructor, and experimenter. *E-light* should be tested by other lighting design instructors.

3. Since the study was conducted only over a week, the students were able to use the software programs but not master it. The students got the opportunity to work for two more weeks following the study to refine their design solutions. See Figure 6.

![Figure 6. A final photometrically accurate rendering of the interior space of the shelter for teenage mothers (Student: Ashley Andrews).](image)

Some suggestions for *e-light* offered by the students in the questionnaire are as follows: “make the titles clearer so you can find info easily”, “videos were very helpful for the specific areas that they showed”, “*e-light* needs to be expanded but it is a highly effective source”, etc. The author is in the process of responding to these student comments in order to conduct the next round of testing of *e-light* in the interior lighting design class in Fall 2009.
Conclusion

The results of this study highlight the importance of interactive digital pedagogical tools such as e-light in enhancing student learning. Similar interactive learning modules could be developed that link interior design concepts to software concepts in acoustics, energy analysis, etc. to enable students and professionals to make accurate design predictions.

References


Figure Captions

*Figure 1.* The e-light multimedia interface.
Figure 2. The diagram shows the three principal components of the project.

Figure 3: Photometrically accurate renderings of interior space of the shelter (Students: Megan Weatherly, Caroline Vickery, Lynnet Sprague, Lauren Goodrum).

Figure 4. Illuminance calculations by a student in the group which received only e-light (Student: Megan McClune).

Figure 5. E-light assessment results in the interior lighting design class.

Figure 6. A final photometrically accurate rendering of the interior space of the shelter for teenage mothers (Student: Ashley Andrews).
Juried Paper Presentation

No Texts, No Tweets, No I-Pods: Millennials "Get" Community Service - What Does Interior Design Education "Get"? 
Rebecca Sweet
East Carolina University

Purpose

According to a report by Deloitte Consulting (Jayson, 2006), Millennials are a global-, civic-, and community-minded generation. This presentation shares experiences and results of annual work days for a non-profit, that included 50 -100 Millennials, and other community volunteers. Projects involve rehabiliting homes for the elderly, low-income, single parent families or other non-profit organizations. Exit surveys and personal interviews show responses of volunteers to be overwhelmingly positive. In addition to service learning experiences for students, service to community is considered scholarship of engagement for faculty, and educationally, it addresses CIDA Professional Standards 2009 (CIDA, 2009) for students' learning.

Concept

For interior design programs, community service is directly referenced in the CIDA Professional Standards 2009. It is found under Program Expectations (opportunities, experiences, or information presented to students in the program) for Standards 2, 4, 5, and 7. For example, in Standard 2 (Global Context for Design) students who participate in community services that address this standard are likely to encounter different socio-economic populations, different familial structures and cultural differences. Further, research and written reflection about the phrase, “Think globally, act locally” create opportunity for students to envision practitioners providing leadership to address critical needs in their own communities as well as around the world. Regarding Standard 7 (Business Practice), CIDA cites,
“The interior design program provides exposure to various market sectors and client types….j) public and community service” (CIDA, 2009, pp. 9, 15).

Through service learning experiences as part of design education curricula, expectations develop that students graduating from CIDA programs will see service as a natural extension of a work experience. “….UCLA’s Higher Education Research Institute found that 66.3% of (260,000) freshman surveyed last fall said it is ‘essential or very important’ to help others, the highest percentage to say so in 25 years” (Jayson, 2006). While students readily accept these community service expectations, interior design programs integrate service learning into pedagogy, and design educators face the challenge of incorporating these experiences into research opportunities. Scholarship of engagement defines scholars in collaborative exchange with community members and a cross section of community services (O’Meara & Rice, 2005). This synergistic, ecological approach incorporates dialogue with stakeholders—a practice integral to interior design. Through communication with community stakeholders and recipients of services, new ideas and creative solutions to old problems are developed and documented for publication through standards of scholarship. Glassick, et. al. (1997) discuss these as clear goals, preparation, appropriate methods, significant results, effective presentation and reflective critique.

**Importance to the profession**

Community service has been important to design firms for years as means to give back to local communities, as well as to increase marketing and public relations initiatives. Today the tradition expands through town and gown and professional organization collaborations, corporate sponsorships, and multi-media coverage. For example, “The ASID Foundation has recently partnered with non-profit organization Rebuilding Together in an initiative focusing on rehabilitating the houses of low-income active and retired members of the military in need throughout the country” (ASID Foundation, 2009).
Where will Millennials take interior design? As educators, we can provide community service opportunities for students through curricula in critical thinking, professional values and design processes. These opportunities present roles for ecological thinking and ethical decision-making in interior design. As scholars, we derive opportunity to further knowledge in writing about community projects and creating empathetic and engaged graduates.
References


Overview and Background

This paper explores sustainable design solutions provided by the Cradle-to-Cradle House Design competition conducted in 2005. Over 900 entries from around the world were submitted to this international house design competition sponsored by SmithLewis architects and the City of Roanoke. The goal of the competition was to design a house to be built in Roanoke, VA that complied with the principles outlined in Cradle to Cradle by McDonough and Braungart (2002). This work examines these competition entries and proposes four different ways in which the majority and entrants approached the design problem. Within each of these four frameworks six sustainable design logics (as proposed by Guy and Farmer, 2001) were examined. Using this combination metric, a series of solutions to sustainable house design are presented based on the types of solutions created by firms and designers from around the world. Several case studies—including the competition winners—will be used to demonstrate various approaches to sustainability in general and cradle to cradle specifically. Particular emphasis will be given to the design development part of the design process in this presentation. The research presented here focuses on integrated building systems and approaches rather than simple material choices.

Methods

A systematic document review of competition entries was performed to identify prevailing themes within the documents. Following the initial review projects were divided into the various
phases of design: concept development, schematic design, and design development.

Construction documents and administration were not included since the competition entries were conceptual projects in virtually all cases. A second document review was completed of the design development category selections. This review revealed four distinct types of competition approaches: integrated whole, wall section or sectional approach, individual systems approach and projects which either included little or no information related to sustainable design and construction. Each of these four subcategories were then examined and coded for specific sustainable design and cradle-to-cradle content. In many cases the projects reflected green technologies that did not meet cradle-to-cradle protocols. The winning projects were then examined using the four approaches and the six sustainable design logics proposed by Guy and Farmer.

Findings

Projects which employed an integrated holistic approach and multiple Guy and Farmer sustainable design logics tended to be more cradle to cradle compliant than those which approached the project from either a systems or materials approach. Projects that used multiple (three to four) of the six sustainable design logics were also more effective than those that followed a single logic approach. The implications of this review of design development approaches to the c2c home competition imply that the most effective approach to producing a cradle to cradle design solution must include a multi-variable point of view which is also contained within a single integrated conceptual approach.

Project Examples: International Winners

Most of the final project winners that were selected by the team of professional judged included Sarah Susanka, William McDonough, Alexander Gavin, Randall Stout and Daniel Libeskind
demonstrate the application of a complex design solution informed by several of the six typologies identified by Guy and Farmer. Not all the winners are discussed here, only a representative few.

First place professional: Photo-Stack House

by Matthew Coates and Tim Meldrum (P-394)

A team of architects designed the first place project in the professional category. It uses a multiple system approach and combines elements of three of the Guy and Farmer approaches to sustainable design: Eco-technic (photosynthetic plasma cell skin); Eco-aesthetic (sensual post modern scientific aesthetic with nonlinear organic forms); and Eco-social (community gardens).

Second place professional: the c2c home

by Patrick Freet (P-151)

The second place entry illustrates an overall integrated approach that relies on a reusable component system. Like the first place entry, the second place winner also implements three of the Guy and Farmer logics: Eco-technic (the components themselves and the manner of assembly); Eco-social (components reuse through garage sales and donations to charity); and Eco-centric (systemic ecology, water use, autonomous).

Second place student: House as Porch

By Damien Urain Linnen

The second place student try also uses an overall integrated approach wherein the house is approached as a porch. Only one Guy and Farmer approach is evidenced:
Eco-cultural (exploration of context and experience of porch--private, semi-private, public realms).

Third place student: Paradigm Shift

Jinyong Yum

The third place student project uses an overall integrated approach composed of modules and labeled as the “I-sharing” typology. Two Guy and Farmer approaches were included: Eco-social (flexible, adaptable; do it yourself assembly; communal dining and play areas); and Eco-cultural (vernacular).

Implications

The review of project entries reveals that the application of a complex approach to solving the Cradle-to-cradle design problem results in a far more compliant design solution than a single approach. The professional entries included a higher level of complexity than the student entries, but in all cases, the approach was multi-faceted.

Sources


This research addresses the types of published sources for single-family house designs and construction details both before there were professional architects in the United States and after the profession became established. The way in which people designed and built their homes in the seventeenth and eighteenth centuries in the U.S. and their reliance on architectural treatises and pattern books helped to shape the current state of single-family house design and construction in the United States.

Background

Since colonial times, pattern books and architectural treatises have provided design inspiration to people in the United States. Several scholars have listed, quantified and located these books. In the place of trained architects, local craftsmen and homeowners purchased books and used them as inspiration for single-family house projects. As early as 1830 some of these carpenter builders began to call themselves architects. The term architect was used during this time by a variety of different people including masons, builders, carpenters, and designers. Previous works have examined early pattern books in the United States and their relationship to the practice of architecture. For example, Upton discusses gentleman amateur architect, Thomas Jefferson’s involvement with architectural pattern books. A more recent account of architecture books by Daniel Reiff spans the history of single-family house design in the United States from the early eighteenth century through the mid-twentieth century and its relationship to the use of printed matter in the design of houses for ordinary people.
Methods

The methods used for this research include archival research of primary documents including plan books and periodicals and coded document content analysis of drawings for a variety of single-family house plans from multiple sources. This study adds to earlier work by providing a context for the architecturally designed houses found in the plan books of the Architects Small House Service Bureau (ASHSB). This paper compares and contrasts designs of the ASHSB with other sources for single family house design plans in an effort to determine if the architecturally designed plans were—in accordance with ASHSB claims—actually better designed and inclusive of sounder construction practices. The significance of this work lay in its ability to justify the value of the trained design professional to the design of the single-family house. Today it is estimated that trained designers design a mere between five to ten percent of single-family houses in the U.S.

Findings

The plan books of the Standard Homes Company included a series of house plans with a paragraph describing the design, an overall size for the house, and, ideally, a photograph of a house that was built from the design. If an actual house was not available for photograph, a rendering was included. The 1928 plan book included 79 designs for small houses and five garage designs. A note throughout the book states “All plans are so prepared as to permit frame, stucco, brick or tile construction.” No information about the types of drawings that are obtained when purchasing a set is included. The majority of the designs are Colonial Revival
style supplemented with a few English Cottage style selections.

The Stickley plans differ stylistically from the plans designed for the ASHSB.

While most of the ASHSB designs rely on the Colonial Revival style, the Craftsman plans feature arts and crafts style bungalows. One way in which the designs presented are similar between the two sources occurs in the interior design of the spaces. In an article entitled “A Bungalow of Rare Comfort” the home of Mr. Rust is featured as are several of the unique interior features: a fold down ironing board, built in china cabinets, kitchen cupboards and other appurtenances regularly featured in ASHSB designs.

The Sears and Roebuck House plan books included not only plans, exterior renderings and brief descriptions of their designs, but also price information and information on their “easy payment plan.” Detailed descriptions about what is included in the house price as well as the cost of options is also included for each design. The front matter of the book provides information about drawings and guarantees as well as an introduction to the Architects’ Council: “Where else is a house plan given such experience? This Council consists of a Chief Architect,
and a corps of able assistance, including a woman adviser, who understands the
requirements of the housewife.\textsuperscript{iv} A key reason for given for using the Sear’s
plans is “it saves you all architects’ fees.”\textsuperscript{v}

Like the Sears designs, the Aladdin Homes plan book includes pricing
information, an exterior view and a plan. Added to this is a more detailed
description of the design and bird’s eye view of the interior spaces with furniture
to show a potential homebuyer what fits in each room. In addition to house plans,
the catalogue includes garage building designs and sample additions that can be
purchased and added to an existing Aladdin home design. While the majority of
the designs are modest and many are bungalows, one example of a Colonial
Revival design was included. This is also the most expensive model in the
catalogue.

Like the Aladdin designs, the majority of the Bennett Home designs are modest
bungalows. A few examples of Colonial Revival style houses are included: The
Colonial model and the Clarendon.

What Differentiated the ASHSB?
The ASHSB sought to differentiate their designs from those of other house plan services of the day. In How to Plan, Finance and Build Your Home (1919), they had an illustrated article entitled “Good Taste and Savings—Bad Taste and Waste. This article demonstrated features that were deemed wasteful. Twelve characteristics were identified and described: posts which were out of scale, porch roof which had an overly wide overhang, misused brackets, unnecessary bay window, exposed rafter ends, clumsy brick work, horizontal building bands, twin windows out of scale, brick balustrade, decorative features which served no function, bay windows without foundations, and unneeded windows.

Examples from other manufacturers of the day, especially those of the Bennett Lumber Company and Aladdin Homes feature many of the details that the ASHSB members railed against. These same features commonly occur in designs from Bennett Homes and the Aladdin Company, and to a lesser degree in designs from Sears and Roebuck.

The most popular designs of the ASHSB were completed in the Colonial Revival style including Dutch Colonial. The plans of the ASHSB differed from those of their contemporaries in some important ways. While they often appeared similar on the exterior, a careful examination of the plans reveals some keys to why ASHSB members found their plan services to be superior. The plans of the ASHSB were almost always smaller than similar plans of their competitors. These space savings were
accomplished through reduced circulation, the prevalence of built-ins such as fold
down ironing boards, kitchen cabinets, banked closets, and attic storage. ASHSB
plans used stacked plumbing whereas most of the plans of other agencies had
kitchens on one side of the house and upstairs bath on the other. ASHSB plans
showed mechanical services in the basements; basement plans were not
provided by competitors nor was other information about mechanical systems.
Rather than having closets that jutted into the bedroom as did their competitors’
plans, the ASHSB took care to put closets from adjacent rooms in the same bank
between the rooms. Finally, ASHSB designs conformed to their standards for
good taste as outlined in their first pattern book, How to Plan, Finance and Build
Your Home.

Summary

Architects were involved the early house reform movements and the
publications which accompanied them—both magazines and pattern books.
Some have proposed that architects worked themselves out of a job as a result
of their successful involvement in housing reforms of the 1840s and later.
Through the use of house plan books that showed everyone how to have a good
Christian house design, architects effectively convinced people of the need for
this new house type and simultaneously made it easy to remove trained designers from the loop. By publishing their house designs in easily obtained books and magazines, architects made it possible for the builder and client to eliminate them from the process. A potential homeowner simply approached a builder with these plans and asked for a house—no architect required.

An analysis of the plans from the ASHSB in comparison to other plan books of the day suggests that there was a design advantage in working with trained architects over other plan books services with staff designers.
References:


1 Ibid, 107-150.


1 Sears, 17.
The term Jamaican-Georgian surfaced in researching the island’s architectural history as it related to the vast Great House plantations that exist there today. Though used in the description of the architecture, a comprehensive definition that provides a thorough understanding of this term has never been advanced. The island’s architectural culture averted from the existing Indian and Spanish influence to that of the Georgian style when the island became a British colony in 1655. The focus will be to examine the influences that required adaptations of the Georgian style in order for it to be successfully applied in a tropical island setting. This adaptation and reevaluation provides an explanation for how the “Jamaican-Georgian” term evolved. With there being over thirty Great Houses still existing on the island today, the focus will be on a specific house in the city of Kingston built in 1881. The location was selected not only because of its architecture, but more importantly the story it tells of the rise of George Stiebel, Jamaica’s first black millionaire (see image1). Devon House’s Great House stands today as a symbol of hope for the people of the island and also acts as a reminder of the island’s British architectural history.

With the island’s way of life being primarily and directly influenced by the rule of the British, the Georgian style became the choice in architecture and interior design in the 1700s. Many of these houses reflect a late Georgian style, the Regency to be
specific, which was established in England during a political change when Prince George acted as Regent for his increasingly mad and blind father, King George III. Occurring during the years 1790 to 1830, the Prince Regent established a more opulent style of living and designing. Considered as the most glamorous and detailed period in British design, the Regency was influenced stylistically by the 1798 French revolution and the wars against France. It resulted in a political and artistic expression of styling that would now incorporate the French’s use of ancient Egyptian décor such as sphinxes and crocodiles, and the ideas of Classicism. Many of these same attributes were seen in the architecture of the Great House’s in Jamaica. The differences occur with the way in which the style was applied, as well as the availability of materials on the island at the time.

Devon Houses’ history begins in 1881 and is considered as late Georgian in style (see image2). Sitting on a twelve acre plot of land, the house was designed by engineer Charles P. Lazarus. Though Mr. Lazarus was of both Haitian and Lebanese decent, his local Jamaican education allowed him to design Devon House to the British building standards set at that time. The house was built with red bricks and mortar, and timber on the first floor, and only timber on the second floor. As was traditional, the kitchen was built detached from the actual Great House due to the fear of fires. Devon Houses’ late Georgian inspired design becomes Jamaican-Georgian with features such as sash windows that are bordered by jalousie or louvered windows, the wrapping of verandas, and the use of local resources such as limestone, mahogany and cedar as building materials. The jalousie or louvered window (see image3) is a horizontal sloping, overlapping grouping of wooden slats that are operated manually to let in varied
degrees of air and light into a building. Devon Houses’ louvers run the length of the tall, central sash windows and were placed all around the house, on both upper and lower floors, to take advantage of any prevailing winds. Because the typical Georgian house is designed symmetrically, as so is the case with Devon House, the application of the louvers for cross ventilation was deemed successful in its ability to provide interior cooling for these Great Houses. Devon Houses’ use of wrapped verandas, which are connected at either end and run the entire length of the house, allowed its inhabitants to make use of the exterior of the building since substantial air was not always filtered in through these two points. Kingston, Jamaica tends to get winds filtering in from the eastern and western parts of the island and thus it was important in the building of these houses to understand the climatic tendencies in order to create better solutions. The verandas were covered and had doors that could be fully opened to allow any air that may enter the house to do so. The roofing of these verandas also acted as shaded areas which kept out any direct sunlight from entering the house from these directions (see image4). The typical Georgian style calls for a brick and mortar structure, and Devon House and all the Great Houses in Jamaica, had this in common (see image5). It was typical that the mortar created for use with the imported British brick, consisted of a mixture containing the lime-stone that was abundantly found on the island. With Jamaica’s terrain being primarily mountainous, both yellow and white lime-stones were found in the many caves that are still present on the island today. These lime-stones, when prepared and combined correctly, would produce the perfect cement or mortar for building with brick. Mahogany, which grew abundantly along the coastlines of the island, was considered as lighter and of a much more porous nature. Durable and varied in
color, the mahogany that often grew to great heights of sixty to one hundred feet also became a big commodity that was later exported to Great Britain for use in construction and furniture making. Both mahogany and cedar became responsible in Jamaica as a roofing material for the houses built in the 18th century, often used to making of shingles (see images 6 and 7). Though these elements begin to shed light on the various changes made, the island’s architectural vernacular still incorporates many of the same proportional, symmetrical and geometric features of the Georgian style. These were simply some of the solutions that prompted the coining of the term Jamaican-Georgian.
Defining "Jamaican-Georgian"

Dierdre Barnett

Image List

George Stiebel image1 jpeg

Devon House image2 jpeg
Jalousie/Louvered windows image3.jpeg

Covered verandas image4.jpeg

Brick, mortar and timber construction image5.jpeg
An Interactive Tool for Interior Design Education: Understanding Color Harmony
Amanda Lautermilch
UNC Greensboro

Introduction

This project explores the creation of an interactive multimedia tool for understanding basic color theory as part of an interior architecture/design curriculum. The project is meant to serve as a foundation for understanding basic color concepts and is the first in a series of presentations on more complex issues in color theory to come.

Color is an integral part of the interior design profession. Successful projects often make good use of color to enhance design intent (Pile, 1997). This project incorporates interior specific examples of color harmonies, to aid design students in the comprehension and understanding of basic color theory. By presenting the information in an interactive multimedia format, design students have control over the learning process and can progress through concepts at their own pace.

With the advent of computer technology, researchers are paying more attention to how students learn and retain information. For many years, printed or spoken verbal text was the dominant tool of education. However, modern students have access to information at unprecedented levels. These new students learn through discovery (DeGennaro, 2008). Multimedia learning tools allow the student to learn more deeply from various images, animations and text than from more traditional modes of communication involving words alone (Mayer, 2003). This multimedia-learning tool for color theory allows students some control over the presentation of information and involves a “discovery” element that will enrich understanding of color harmonies within an interior context.
Literature Review

Color Theory

Johannes Itten developed the modern color wheel. Itten’s color wheel is based on red, yellow, and blue as the primary triad and includes twelve hues: red, red-orange, orange, orange-yellow, yellow, yellow-green, green, green-blue, blue, blue-violet, violet, violet-red (Itten, 1974). Itten (1974) defined the concept of color harmony. Color harmony is “the craft of developing themes from systematic color relationship” (p. 118). He labeled these color chords dyads, triads, tetrads and hexads. These chords selected colors from the color wheel based on the hues opposite a straight line, a triangle, a square or a hexagon (two triangles). Current basic color schemes follow this formula.

Pile (1997) identifies five basic color schemes derived from the color wheel. A monochromatic scheme is made from one hue. An analogous scheme selects up to three or four colors side by side on the color wheel. Complementary schemes select colors from opposite positions on the color wheel. Triad schemes are based on three hues spaced equally around the color wheel. And, the tetrad color scheme uses four hues spaced evenly around the color wheel.

Each color scheme can utilize various shades and tints of the chosen hues to add interest and complexity. Although shade and tint are out of the realm of this project, it is helpful to know that shade is the amount of black added to a hue and tint is the amount of white added to a hue. With tints and shades applied to each hue of the color wheel, the possibilities for color combinations becomes quite complex. The application of these color harmonies specific to interior design can be explained using multimedia tools.
Adobe Flash & Multimedia Learning

Modern students are exposed to multitudes of images and graphics, coupled with text and sound. In order to meet the needs of new students, multimedia-learning tools provide a richer exploration of material (Mayer, 2003). Mayer (2003) outlines some general principles of successful multimedia learning. Students learn better from words and pictures together than from words alone. Students learn better when corresponding pictures and words are presented near rather than far from each other. Students learn better when corresponding pictures and words are shown simultaneously. And students learn better when extraneous pictures, sounds and words are eliminated.

Adobe Flash, formerly known as Macromedia Flash, is a software program capable of creating animations and interactivity. Flash can manipulate both raster and vector graphics, sound and video, creating rich multimedia experiences (Perkins, 2008). It has become the eminent software program for web components and animations. Adobe Flash utilizes its own programming language called Action Script. Action Script, similar to Java Script, enables the user to program a myriad of functions and interactions such as interactive links, pull down menus, etc.

The Flash interface is similar to other Adobe products such as Photoshop and Illustrator. In fact many of the tools work the same way and the communication between the programs allows for seamless transfer of objects and images. This compatibility makes creating complex motion graphics more user friendly. However, Flash is capable of creating and drawing graphic shapes directly in the workspace with ease.

The main difference between Flash and other Adobe products is the ability to create time-based graphics. The timeline is a crucial element that orders the sequence of graphics in Flash. The user creates animations by placing different images on different frames.
Methodology

The researcher first chose basic concepts of the color wheel and simple color harmonies to present in the multimedia presentation. After identifying key points of color theory to address in the presentation, a script was developed. The script consisted of storyboards with general layout information and ideas on interactivity that would give the user/learner more control over the pace and order in which information was presented. The script, although fairly complete, was only a guideline.
Original Storyboards
The next step in the process was to implement the design into an interactive multimedia presentation. This involved selecting and learning an appropriate software program. Adobe Flash was chosen to create the presentation. With no previous experience using Adobe Flash, the researcher had to start with very basic concepts of animation and interactivity, slowly learning the skills to create the presentation. After several practice animations, it was possible to assess what was and was not possible in the given period of time. Elements of the script were changed or eliminated according to the four-week time frame and the researcher's skill level to complete the task.

Results

The final project is a fairly short multimedia presentation that resembles a web page. There is an initial homepage or introduction page that informs the user of the purpose of the presentation. The user navigates the presentation by using linked buttons. With each page, the user is presented with new information about the color wheel and color harmony. There are six pages that discuss the color wheel and its components, monochromatic color schemes, analogous color schemes, complementary color schemes, triad color schemes and tetrad color schemes. As the user rolls the mouse over links on each page, the main color wheel responds by enlarging the relevant colors on the wheel. When clicked, these links go to more detailed examples that further illustrate the concept. For example, on the analogous page, when the mouse is rolled over red, the red hue on the color wheel and analogous colors become enlarged. When the red button is clicked, the user sees an example of an interior scene that employs a red analogous scheme.
Basic Color Theory:
UNDERSTANDING COLOR HARMONY

ANALOGOUS SCHEMES
USE THREE TO FOUR HUES
ADJACENT ON THE COLOR WHEEL

intro • colorwheel • monochromatic • analogous • complementary • triad • tetrad

Final Project Screen Shot
The user always has the choice to visit any page at anytime, due to the navigation buttons at the bottom of all the main pages. This simple technique allows the user to control the learning experience by selecting topics of interest and discovering the information at the user determined pace.
Conclusion

Time spent learning the program definitely took time away from the design process, but was necessary in order to know what was possible. With a finite amount of time to create the presentation, the researcher made very deliberate choices to keep the graphics simple. While this could be seen as a strength, the presentation becomes a bit monotonous as it continues through the color harmonies. It becomes difficult to quickly tell the difference between the different pages without reading the title on the side of the page. A simple change in background hue or transparency could provide some visual variation.

Learning Action Script was another limitation that shaped the project. The researcher had no previous experience writing code. Action Script is a fairly complex programming language that requires in depth understanding of action phrases. The researcher chose to use Action Script 2.0 for the fairly simple commands used in this project, such as Rollover, Rollout, on Press and transparency commands. A more extensive knowledge of Action Script could increase the interactivity of this project allowing for more user input and decision-making.

The final project presents a small portion of color theory, dealing only with hue as an aspect of the color spectrum. Concepts of tint and shade make color schemes much more complex and could be woven into this presentation to provide a deeper understanding of more subtle color combinations. The colored interior scenes based on the color harmonies, could become more interactive. For example, students could choose individual colors from a color palette and then apply the color to a blank interior image, creating their own color combinations and learning by doing.

Ultimately the project was an advantageous step in learning how to create interactive learning tools. Adobe Flash, although complex, is capable of creating very interesting and innovative media for the delivery of instructional information. By building on the knowledge gained about the timeline and frames, and Action Script, the researcher feels confident in
taking the next step to develop a series of interactive learning tools that will guide students through more complex issues in color theory for interior design.

References


Juried Paper Presentations
Graduate Students

Design for Family Centered Waiting Area
Tracy Pace
Savannah College of Art and Design

PURPOSE
With the emergence of patient- and family-centered care in the medical field, healthcare systems are doing what they can to adapt 20th century facilities into a 21st century model of patient care. This paper shows the need for hospitals to be more attentive to the needs of the whole family in order to support patient- and family-centered care. Questions addressed include: Can healthcare facility design promote patient- and family-centered care by reducing stress of patients’ visitors and family members? Can an existing hospital be adapted to a more progressive model? For the purpose of this paper, the research focus is on the needs of family members in intensive care waiting areas.

CONTEXT
An exploration of how the concept of family-centered care is integrated into facility design is relevant at this time because, according to the United States Census Bureau, there were 7,569 hospitals in operation in 2005, with only a small portion of them built after the year 2000. Therefore, the United States’ healthcare sector is facing a significant surge in new construction in an effort to replace outdated facilities, which were not designed under the current paradigm of family-centered care.

Popular with children’s hospitals and neonatal intensive care units, family-centered care has had slower acceptance into adult units with reasons for resistance ranging from security and privacy issues to perceptions that family members would have a negative impact on recovery and healing, staff feelings of inconvenience, lack of time to educate participants, healthcare staff’s fear of being watched by family members, a nursing shortage, and lack of geographic space. Since family-centered care is a philosophy and approach to healthcare that facilitates collaborative relationships in the patient care process, the bulk of effort in implementing this model is put into educating staff and supporting a change in culture. Thus, healthcare providers are not as concerned with the physical environment or do not realize that the physical environment may be used as a tool to assist in the acceptance of this new system of partnering. However, the relationship between facility design and the success of a family-centered care plan goes hand-in-hand with implementing a new model because it may provide an opportunity for family members to seamlessly integrate into the mix of care participants by offering support spaces for those waiting to be there without standing in the staff’s way.

REVIEW OF LITERATURE
Over the course of the past century, there have been six major tendencies in hospital architecture ranging in floor plate shapes from rectangular, to circular, cross...
shape, square, and the most recent, triangular, which was popular from the 1970s to present. (Kobus, 2008) With each shift in shape there was a shift in end user concentration. In the later part of the 20th century, design was aimed at patient-centered care and complete spectrum of users were still unaddressed. The Institute for Family-Centered Care (2009), seeing the oversight of family and visitor inclusion into the planning process, composed an environment and design checklist for today’s facility planners and end users to evaluate family friendliness of healthcare facilities. Problematic areas are able to be fleshed out and become talking points for design considerations either in new facility design or in the process of renovating existing spaces so all users of the space are accommodated.

While some hospitals that have embraced the patient- and family-centered care philosophy allow a family member to sleep in patient’s intensive care room overnight, not all hospitals are equipped for such a scenario. In acute care units where the patient may be incapacitated or need assistance in conveying information to healthcare professionals, family members become an extension of the patient and act on their behalf often making decisions for the patient or communicating for them. In assuming this role, the family member(s) becomes tethered to the patient and often feels the need to stay at the hospital round the clock. This “bedside phenomenon” (Lam & Beaulieu, 2004) follows suit with the constant need for information by family members. Enter the critical nature of developing a model for a waiting room design that would support a family member’s basic physiological and safety needs while also acknowledging the psychological impact the situation may have on an individual and how environmental design may lessen the effects of this stress.

METHODOLOGY
The researcher used a triangulated approach to conduct research. Site visits, observation, visual documentation, and interviews were conducted in order to uncover behavioral patterns of persons bound to an alien environment for extended periods of time. Attention was also paid to facility conditions and amenities, and to people’s interaction with their physical surroundings.

1. Site Visits
Visits to hospitals and medical centers in Savannah, Georgia and surrounding areas were made to document the facility conditions, spatial layout, and amenities provided to support families while they wait. When possible, a tour of the entire unit was conducted in order to provide a better understanding of how the unit operates and how family and visitors navigate the spaces. Written notes were taken during the tour as documentation of the visit along with taking photographs and sketches when possible.

2. Observation
Fourteen observations of various acute care waiting areas were conducted. Data was recorded documenting the types of users, behavior of users, layout of physical space, types of personal belongings brought by users, methods of distraction users rely on, and other important information affecting the success of the facility design.
3. Visual documentation

Photographic evidence of existing site conditions and user behavior was obtained using a digital camera. Sketches supplement digital images when the researcher deemed the situation inappropriate for camera use. Visual documentation was then sorted according to emerging themes to see identity sets of underlying patterns indicating possible grounded theories.

4. Interviews

Individual interviews were conducted with the users of the observed spaces, healthcare professionals directly responsible for overseeing the waiting room(s), such as nurse managers or facility design personnel, and with architecture and design professionals experienced in healthcare design. Interviews lasted from 10 minutes to one hour. Notes were taken during the interviews as a record of the meetings. A set of initial questions was prepared but they were also flexible enough to allow for exploration of unforeseen information.

FINDINGS

Two formal interviews and a total of fourteen observations were conducted over a period of fifty-three consecutive days. Three of the observations were return trips to previously observed waiting rooms to gather more information on a different day and time of the week. Observation visits lasted a minimum of one-hour per visit and involved sketching the area layout, making notations of where people were sitting, generalized notes concerning demographics of people and how users interfaced with the environment, and sketching or photographically documenting behaviors which proved to be the most important component of fleshing out evidence for the basis of the final design solution.

Using a systematic method of qualitative content analysis of images obtained during site visits, conceptual categories emerged as repeated patterns of behavior and personal items brought into waiting areas (fig. 1). The process involved examining images and making note of all elements. As words recurred, concepts or themes surfaced derived from the frequency in which they occurred. For example: food products, food containers, coolers, napkins and paper towels showed up in several images. All items are related to eating; therefore, the theory grounded into the images was that eating is a key activity for people in long-term waiting areas and should be considered when designing the prototypical waiting space. Based on category saturation, the following themes or main activities became apparent: eating, reading, sleeping, talking, using a computer, and watching television. The most frequent personal items brought included blankets, clothing, coolers, food, pillows, and reading materials. It also became apparent that users utilized their personal items as a means for territorial marking. Research findings were addressed in direct relation to how the design solution could either discourage or encourage observed behaviors, handle accumulation of personal items, and support activities or allow for new ones.
CONCLUSION

During the research phase, images of many hospitals emerged as examples of what healthcare systems are doing in existing hospitals to alter the spaces in order to make hospitals more family friendly. However, the examples shown were modifications of outdated rooms, which did more to detour interest in family-centered design solutions than to promote it (fig. 2). There is a movement of healthcare design firms to address the potential of new construction projects in terms of incorporating family-centered care design guidelines, but existing hospitals with viable spaces should not be overlooked. Waiting rooms are not revenue points or enhancers for hospitals, yet they stand to offer non-tangible benefits if redesigned to make those waiting more comfortable and positive about their surroundings (fig. 3 & 4). This approach could then result in higher satisfaction ratings for the hospital, increased participation of family members in the care giving process, which could potentially alleviate some demands on nursing staff. It could also be beneficial to hospital revenues, by supporting quicker recovery times for some patients, which would increase bed turnover.
### Distraction Activities

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<th>Image</th>
<th>Word Association</th>
<th>Pattern</th>
<th>Activity</th>
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</thead>
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<td></td>
<td>Sitting</td>
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<td></td>
<td>Reading</td>
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<td></td>
<td>Concentrating</td>
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<tr>
<td></td>
<td>Not talking</td>
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</tbody>
</table>

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**Fig. 1:** Set #1 of field documented images analyzed for thematic content.

**Fig. 2:** Existing Intensive Care waiting area of St. Joseph Hospital, Savannah, GA.
REFERENCES


Juried Paper Presentations
Graduate Students

A Case Study: Millennials Reflect on Digital Technologies in the Classroom
Stephanie Sickler
Florida State University

Context of the Problem

Technology brings an ease of access to millions of millennial students each day. Millennials, born between the years 1982 and 2002 are filling college classrooms at record numbers and bringing their hand-held technologies with them. Authors of the article "How the new generation of well-wired multi-taskers is changing campus culture" observe that while these learners are wired to the internet, chances are they are also texting on their cell phone or listening to music or pod-casts on their MP3 players. They are constantly plugged in to something ("How the new," 2007).

Millenials in general are more "in touch" than any other generation ("How the new," 2007). Subsequently, the millennials have earned nicknames such as "the net generation" ("How the new," 2007) and "digital natives" (Prensky, 2001). As technology "is assumed to be a natural part of the environment" for millennials, they are a generation of multi-taskers in constant connectivity (Oblinger, 2003, p. 38).

Millennial students have been shown to be eager, persistent learners who might be more likely than other generations to take an equal role in their education to what they are demanding from their educators. If the goal is to get students to think about what they are thinking about, meta-cognition and active learning exercises could engage students in these types of learning processes. Millennials respond well to structured class exercises that allow for creativity, says Angela McGlynn (2005), making active learning exercises one possibility of how to reach them. Active learning will engage them, challenge them and allow them to make strong connections to the material they are learning the first time they are exposed to it.

For multitasking millennials, it is important to establish rich connections the first time they are exposed to new content. Otherwise they may not come back for seconds, so to speak. Meta-cognition is another way for millennials to accomplish this. Meta-cognition is defined by Webster’s Dictionary as “awareness or analysis of one's own learning or thinking processes” (2009). Marc Prensky suggests their brains are physically different, making a more engaging learning style a must in order to connect to millennial students (2001). Millennials relate much better to digital technology and instructional techniques that access these methods and thus Prensky believes the gaming format would be an effective way to facilitate active learning (2001).

Some studies suggest that as millennials relate better to video games, a gaming format in their educational experience would engage students more than traditional instructional techniques. Some go so far as to suggest that if class work instructions were given in a game format, the learning curve would likely be enhanced (Oblinger,
Though it is unrealistic to expect all course materials to be turned into games, there may be other steps educators can take to ensure their students are involved with active learning.

Purpose of the Study

As much of the research on millennials was reported several years ago, when millennials were first populating college classrooms, it seems an appropriate time to re-evaluate the task of aligning student preferences with instructional tactics. This case study was part of a thesis study which examined learning preferences of millennial interior design students. The review of literature for this project examined and identified learning traits and pedagogical preferences of millennial students in general. This study examined millennial interior design students in particular and was meant to be only a snapshot of the learning exchange that takes place within an interior design curriculum. The component addressed here identifies the implementation of computer-based information systems as information technology within a lecture-based class.

The study can be repeated at other institutions to determine the perceptions of other groups of millennial interior design learners. Preferential differences may be evident and/or influenced by regional and economical factors as well as individual teaching styles or course content. It is important however, to recognize that effective communication with students is at times dependent upon an understanding of how students learn. The intent of this study is to stimulate a conversation among interior design educators addressing effective instructional techniques reaching millennials in interior design classrooms today.

Methodology

In order to record students’ technology preferences, students in a non-studio course were observed over a period of ten weeks. Daily class activities were recorded on a check sheet during eighteen class periods. Sophomores were chosen for this study because they had recently been accepted into the interior design program and thus offered fresh perspectives of the course and instructor. In addition to the observations, participants were asked to respond to technologies used in the classroom via questionnaires administered throughout the observation period. Forty-two students participated in the study. Participation in the case study was not required as part of the course but most students had thoughts to share on the topic of digital technologies.

Findings

Findings from the study showed that broadly speaking, the millennial interior design participants appeared to embrace the use of information technology, or IT, in the classroom. Information technology, as defined by the Information Technology Association of America (ITAA) is “the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware” (The Gale Encyclopedia, 2008).
Observations showed that three different IT applications were occurring in this class on a daily basis. Activities included PowerPoint presentations, videos embedded in PowerPoint presentations and Blackboard (online teaching/learning tool which acts as a forum for class discussion, announcements, course materials, email, grades, etc.) access. On several occasions the instructor conducted demonstrations or gave examples from material on the course’s Blackboard site, but most often it was a tool students could access outside of class. Observations showed that every class period contained IT except for days on which students or groups were giving presentations. The included tables and figures detail the recorded IT occurrences and student perceptions and opinions regarding such activities.

At the end of the study, it became clear from the students’ responses that there was not one singular voice among the study’s participants. Rather, what emerged from the responses was a formula for their needs. Students wanted it all. Participants indicated that they wanted lecture (but not too long) and discussion (but not too much) and videos (but the right ones) and PowerPoint (with the right amount of words) and notes they could fill-in-the-blank on so they would stay interested.

It is, therefore, the challenge of interior design educators to take millennial research under advisement and to recognize that what students crave the most is diversity. Yes, they love the digital technologies. All the data from this study supports their satisfaction with digital technologies. But our students may need more than that to fulfill their learning needs.
Table 1. Type and frequency of interactive technology used in Social Psych and its context. A total of 18 class sessions were observed. If a technique was used more than once during a class session, it was counted as only 1 occurrence.

<table>
<thead>
<tr>
<th>Interactive Technology</th>
<th>Social/Psychology</th>
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<tr>
<td>Form of IT</td>
<td>Frequency</td>
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<tr>
<td>PowerPoint-assisted</td>
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<tr>
<td>discussion</td>
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<td>PowerPoint-embedded</td>
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<tr>
<td>videos</td>
<td></td>
</tr>
<tr>
<td>Blackboard</td>
<td>3 demos + 24/7</td>
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<tr>
<td></td>
<td>access</td>
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</tbody>
</table>

Student Preference for IT Use in Social Psychology

Figure 1. Student preference for information technology in Social Psychology.
Figure 2. Suggestions by participants for improvement in Social Psychology.

Figure 3. Aspect of PowerPoint-Assisted lecture students preferred.
Figure 4. Aspect of in-class videos students preferred.
References:


Juried Teaching Forums

**Multifaceted Benefits of Studio Based Service Learning**
Jennifer Belk
Winthrop University

THE PURPOSE

The intent in this presentation is to walk participants through a course which utilized a local non-profit organization as the client for a full term senior interior design studio project. It will be shown how the process not only benefited multiple entities, but also facilitated the meeting of course objectives in a richer and more significant way.

Many university faculty resist the incorporation of service learning into their courses. There can be many challenges to such a project type but early planning and an open dialog with the client group and students can alleviate many issues. Some typical faculty concerns include:
- Aligning client needs and expectations with course competencies
- Beliefs/preferences of students
- Preliminary planning for instructor

The following course summary will address all of these concerns.

THE PROCESS

The senior commercial (non-office) studio at Winthrop was partnered with a local interdenominational church that was on the brink of beginning a building campaign but was without direction or industry contacts. The church’s services and activities took place at the local YMCA after hours (within a pedestrian oriented residential community) and the church maintained a small off-site office space. With few full time employees and a need for physical space outside the constraints of their space-sharing arrangement, the staff met with continual difficulties maintaining services for a growing congregation, 40% of whom are 18 and under.

Prior to student involvement, basic conceptual goals were discussed with the church committee. For “homework”, the committee collected photos of spaces, colors, textures, etc. that they felt represented their collective vision. Available properties were researched through local brokers and information regarding a potential site was acquired in order to give students as practical an experience as possible. The property’s developer provided marketing and site analysis data that would be integral to the students’ future work. Although time consuming, this investigation took place prior to the semester start and, for the instructor, led to multiple opportunities for...
networking, future consulting prospects, and a deeper understanding of the geographic area in question.

The committee was informed of the course competencies that would have to be retained and therefore, based on the course description, retail and food service components were a required inclusion to the design program. Although not in the original scope of the client’s needs, the inclusion of these two components added space and conceptual opportunities which the clients could explore. Time commitments required of this partnership (for site visits, critiques, etc.) were also discussed.

Upon introducing students to the project type, students and instructor discussed how designing this type of large scale, multi-use facility and how the future pro-bono client interaction would benefit them and make them better developed designers. This allowed them to take more ownership of the project and set aside discomforts they may have had with the subject matter. Students were instructed to consider the contemporary personality and layered programming they would encounter and were encouraged to consider the project’s similarities to other facility types. Those with religious backgrounds were encouraged to set aside their own preconceived space ideas while those with no background were encouraged to visit multiple denominational facilities and become familiar with spatial terminology specific to liturgical design. Instruction was given simultaneously so as not to draw attention to students’ affiliations, or lack thereof.

Prior to the first meeting with the client, the class was given background information about the church and its founders, learned about the developer, and analyzed the master plan of the site to better understand the multiple layers of clientele and constraints involved. Students were given brief literature review and on-site observation homework assignments (re: liturgical design, multi-use facilities, urban planning, etc.) and subsequently returned to class to pool their findings.

Students developed, as a group, their own programming questionnaire based on findings in their research and the preliminary conceptual ideas of the committee. An extended class was held to allow students to interview the committee, acquire detailed programming information, visit the church offices and have a tour of the proposed site with the developer.

The project (based on curricular needs as well as client interest) took a decidedly “green” slant and students were required to forecast attainable sustainability goals, correlate those with LEED credits, design appropriately and then document and explain their solutions.

Throughout the semester, students received instruction on content integral to the primary objectives of the course. Students applied their knowledge of space planning, codes, mechanical systems, lighting and many other aspects to the design of the complex multi-functional facility. Additional direction was given on how a student’s graphic and verbal presentations might differ based on audience makeup and size. Guest speakers and professional development opportunities were geared toward course competencies as well as project specific content (sanctuary design, acoustics).
Client contact continued throughout the semester through email correspondence, a midterm visit by the committee to our studio, and a final formal presentation to the committee and professional ID jurors. After each session, students reflected on their experiences serving the clients and their efforts producing the project. During winter break, student projects were put on display at the current facility for viewing by the congregation and community.

THE RESULTS

Overall, the experience was successful and produced extensive and inclusive portfolio pieces for many of the student participants. Projects were retained for future accreditation visits and recruitment purposes. Two of the ten students were offered jobs upon graduation from the firm which supplied our guest speakers and jurors.

Rather than hindering the content delivery, many course objectives were primarily satisfied or enriched through the inclusion of an authentic client, tangible project site, and ongoing communication opportunities. These objectives included:

- **Demonstrating programming skills**, including problem identification, identification of client and user needs, information gathering, research and analysis.

- **Demonstrating an understanding** of theories of human behavior in interior environments including human factors and the relationship between human behavior and the built environment.

- **Demonstrating critical, analytical, strategic, and creative thinking** as well as the ability to think visually and volumetrically.

- **Demonstrating professional discipline** and active listening skills.

- **Expressing ideas clearly in oral presentations and critiques**, communicating visually ..., as well as communicating clearly in written specifications, schedules, project programs, and concept statements.

The benefits of this type of union extended farther than just to the students involved.

- **Students** grew primarily from the client interaction and real world application and, though stressful, reacted positively to the overall experience.
- The **client and end user** received free design ideas for a potential building campaign and assistance with developing the organization’s facility goals.
- For the **instructor**, this endeavor served as an important addition to the teaching and service categories of academic advancement. Creative activity and scholarship opportunities were attained through professional exposure and supplemental consultations.
- **Positive program** exposure to community members was an advantage for the university and department while the understanding of the ID **profession** benefited from exposing a local audience to the true responsibilities of professional designers.
Handouts available for digital distribution (email request to belkj@winthrop.edu)

- Syllabus, Course Timeline and Lesson Plan
- Student Project Requirements
- Student Programming Questionnaire for Client

REFERENCE LIST
(Both pedagogical and for course literature review)


Photo captions:

Photo 1: Current state of client’s services
Photo 2: Example of “vision” photos collected by committee members
Photos 3-5: Presentation and documentation materials from a completed student project (Photos provided by Ashley W. Hall, CDT, LEED AP)
Four assignments for history of architectural interiors courses

History of interiors courses are a core component of interior design curriculum. History courses provide students with the background to understand and appreciate architectural history and preservation. Understanding and application of historical design knowledge is a CIDA standard. Unlike more hands-on studio courses, history courses are usually lecture based. While this method gives students the content they need, it can be supplemented with projects that encourage students to learn in different ways. In addition to traditional slide-based lectures and tests, four different assignments in sequential History of Interiors I and II classes where tried during the 2008-09 school year. Each of these assignments was designed to utilize and develop different learning skills. At the end of the year, anonymous feedback was collected from students to gauge their opinions of the projects and their test scores were compared. The class was composed of 17 sophomore students.

During the fall semester, students wrote two 10-page essays and kept a sketchbook. Sketchbook assignments included labeled drawings of three Greek orders, floor plans, building interiors and facades. Despite the difficulty of the essays and the sketchbook, these two assignments were well reviewed by most students. Students felt that they learned their essay topic and improved their thinking and writing skills. Sketching helped many students to remember assigned building and they felt prepared when sketchbook assignments appeared on tests.
History textbooks provide students with an overview of the past, but they are not primary sources. In the spring, each student read an original work by an architect or designer and presented their book to the class. These presentations allowed students to practice public speaking skills and share their author with each other. The class did well on this assignment and despite reporting stage fright; students enjoyed an opportunity to present as an expert on their author.

In their private lives, undergraduate students, part of the millennial generation, are famous for their integration with technology. At the individual level, these students varied greatly in their ability and desire to use technology for classroom assignments. The spring class used WebCT extensively during the second half of the semester. Each student prepared a graphic essay for their classmates and led an online discussion. Most students felt they learned from preparing their presentations; however, many struggled with basic computer skills. Two-thirds of the class preferred in-class lectures to the online activities, even though they were excused from class.

Students favored conventional assignments because they believed they learned more through lectures and essays. Students who enjoyed the online assignments said they liked the opportunity to interact with other students and share opinions. Student preferences were strongly tied to what they believe taught them the most. They may have reported a preference for lectures and essays because they are familiar with these types of assignments; they may not trust that graphic, oral, and online activities are valid. Or their struggle with the media may have hampered their perceived absorption of the material. Fall and spring test scores were not significantly different.

Thanks to support from Valdosta State Faculty Scholarship Funding
Juried Teaching Forum

Weaving Together Stories: Making History Relevant through the Design Cosmology Blog
Patrick Lee Lucas
UNC Greensboro

In order to meet student expectations for delivery of course material using current technologies, this teaching forum will serve as a space to demonstrate the impact of a reflective blog for one section of a history and theory course in a design program. The teacher will review a semester-long assignment organized around conceptual classifications and the results of the student endeavors to address the material they generated. The author will offer evidence of student understanding of design ideas, clearly significant to the study of design in social and historical context.

Four chronological units provide the frame for the design history and theory course: FOUNDATIONS, ALTERNATIVES, REFLECTIONS, and EXPLORATIONS. In the foundations unit, the students explore humanity’s first efforts to shape their built environment, sifting through evidence from the cave paintings at Lascaux through the development and eventual decline of the Roman Empire. The primary theme of the unit is the development of classical architecture as a way of shaping and decorating space. In the alternatives unit, students investigate buildings and places of the Romanesque, Gothic, and Renaissance time periods, connecting their manifestation to architecture and design from the ancient world. In the third unit, students confront the rise of interiors and the increasingly complex buildings of the seventeenth, eighteenth, and nineteenth centuries. As reflections, these buildings link backward but speak of humanity’s hopes for the future. In the final unit of the course, students discover the linkages to all of history as Modern designers grappled with deriving additional expressions for contemporary architecture and interiors. The course engages material representations of architecture
and design across the globe in an attempt to contextualize the American design experience and the particular built environment of the campus and the community in which our university sits.

For the design cosmology assignment, the instructor paired students and assigned them a concept to explore for each of the four course units. These concepts included: patina of place, silent buildings, fingerprints + footprints, chiaroscuro, aqua vita, junctions, the dancing column, the theatre of everyday life, and frozen music. Students applied two lenses in this work, the first an object (scale) lens, and the second an aspect of the subject + object. The result was a matrix upon which students hung their writing, sketching, and image-collecting (see attached: 221 abstractions).

This teaching forum will allow the opportunity for those assembled to review student views of these concepts. The presenter will utilize the student blogs to demonstrate this material during the session. As the blog remains on line, individuals may choose to investigate further the results of the semester. The presenter will also talk about the successes and challenges of the assignment as they relate to grappling with history and theory of design in the digital age, including the juxtaposition of visual and textual data, the ability to immediately access the material by the instructor and students alike, and the kind of discourse that resulted in class and in the final examination for the course.
Juried Teaching Forum

Making a Library: 
Cataloging Print and Sustainable Sample Materials
Anna Marshall-Baker, Mary Jane Conger, and Patty Rowland
UNC Greensboro

“Sample” or “resource” rooms whether in academic or professional settings are often problematic. Challenges include vigilance (are the samples current?), staffing (who is responsible for this room?), and organization (where do I find what I need?). The purpose of this presentation is to describe a process of organizing materials that began when our department moved into a new building.

Print Materials

We took with us a number of print materials, but we discarded all the sample materials which were old, disorganized, and often mutilated. The head of cataloging from the main library came to advise us about our collection and realized the value of sharing the resources with the university and others who search the online catalogue. The Dean of the Libraries agreed with this view and development of a new affiliate library began with the real work of cataloguing and organizing our materials.

Ultimately our print materials include more 800 books, nearly 70 periodicals, and graduate and undergraduate theses. We were thrilled to learn that we have titles that are quite rare in the international database of library materials. These include Architectural Preservation in Japan by Knut Einar Larsen (1994), a book found on the east coast only in our library and at Harvard, and Frank Lloyd Wright/Steelcase, a small pamphlet of furniture Frank Lloyd Wright designed for Steelcase which is only catalogued by nine other libraries.

Material Samples

We began rebuilding our collection of material samples by first establishing that they all would be green or sustainable products or manufacturers. Students in our Materials, Methods, and Technology course are required not only to acquire two green materials for the library (attached), but also to complete a protocol sheet (attached) detailing the material, manufacturer, life cycle analysis, green qualities or practices, and contact information for others who wish to order a sample for their own use. This process ensures about 100 new materials each year while engaging students in learning about materials, talking with sales representatives, and making informed choices regarding
specifications. Dual challenges of organizing and classifying materials such as fabric samples, lighting fixtures, and paint chips were met using the Construction Site Industry format and providing an adequate description for the online catalog. The development of two competitive internships for undergraduate students resolves issues related to staffing the library.

Conclusion

The consequence of this new system for materials is manifold.

- Our status as an affiliate library assures continued support from the university library.
- Anyone searching the online catalog can type a keyword such as “bamboo” and receive a list of book titles as well as a list of fabric, construction, or finish material samples.
- Cataloging the product and material samples enables running various reports, including one to indicate when materials may need updating.
- Through active involvement, students learn more about materials, materials libraries, and working with sales representatives.

Students and others, by way of a library instruction session, learn how to take advantage of the wide variety of materials in the library.
assignment 5 . Materials Library

You are to get 2 samples of products or materials from 2 different companies or manufacturers to put in the Materials Library. Check the on-line catalog first to be sure that you are NOT getting a sample of something we already have.

Each product or material must be sustainable. To determine whether or not it is, you must complete a Protocol Sheet for each sample. If in the process of completing the Protocol Sheet you realize that the material is not sustainable, you need to find an alternative. Send a completed, digital form to me (anna_marshallbaker@uncg.edu) that we will add to our existing data base.

Place a printed copy of the Protocol Sheet in the Materials Library with your material sample. Make sure your name is on the sheet and use a piece of tape to put your name on the material sample.

The two material or product samples that you bring into the Library will be from one of the categories below. We will determine your category in class today.

1. adhesives
2. plaster
3. wallcovering (not paint)
4. upholstery fabric
5. fabric for window treatments
6. shades or blinds
7. wood flooring
8. ceramic tile
9. glass tile
10. linoleum
11. rubber flooring
12. area rugs (not carpet)
13. laminates
14. door and window hardware
15. side chairs
16. office chairs
17. casegoods
18. sofas, couches, or loveseats
19. end and coffee tables
20. dining tables
21. bedroom furniture
22. bedding and linens
23. children’s furniture
24. lighting
Due Dates:

**Tuesday 18 March:** protocol sheets are due by the beginning of class

**Tuesday 15 April:** samples or cut sheets are due in the Materials Library by the beginning of class

Protocol Sheet

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<tr>
<td>PRODUCT/COLLECTION NAME</td>
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</tr>
<tr>
<td>DESCRIPTION</td>
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<tr>
<td>MATERIAL CONTENT</td>
<td>(IN EACH PART OF PRODUCT, EX: FACE, BINDER, BACKING)</td>
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<tr>
<td>RECYCLED CONTENT %</td>
<td>POST INDUSTRIAL, POST CONSUMER</td>
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<td>RAPIDLY RENEWABLE CONTENT %</td>
<td>BY WEIGHT</td>
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<tr>
<td>HARMFUL ADDITIVES</td>
<td>(LEAD, MERCURY, TOXINS, PVC, UREA OR PHENOL, FORMALDEHYDE, ETC)</td>
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<td><strong>MANUFACTURING PROCESS, REFINING</strong></td>
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<tr>
<td><strong>HARMFUL EMISSIONS</strong></td>
<td><strong>MANUFACTURING PROCESS – USING CFC, HCFC/</strong></td>
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<td><strong>LOCATION OF MANUF. PLANT</strong></td>
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<td><strong>TESTS/CODES</strong></td>
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<td><strong>GREEN GUARD, USGBC, ETC.</strong></td>
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<td><strong>END OF SERVICE LIFE</strong></td>
<td><strong>RECYCLABLE/COMPOSTABLE/BIODEGRADABLE/REUSABLE</strong></td>
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<p>| <strong>COMPANY PROFILE</strong> | <strong>GREEN PHILOSOPHY</strong> |</p>
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Juried Teaching Forum

Virtual Learning Environments for the New Millennium: A Second Life Experience
Susan Martin Meggs and Annette Greer
East Carolina University

Objectives

The objectives of this presentation are: 1). To identify strategies for the use of a virtual learning environment relevant to students in a developing era of digital discovery. 2). To illustrate how students in a foundations level course in interior design applied proactive methods for professional development that provided a scaffold to a broader learning experience by strengthening skills in communication, conceptual thinking, research, assessment and organization. 3). To illustrate evidence of outcomes from the interior design class.

Student Profile

Students in the foundations course in interior design are first semester freshmen, predominantly female. There is no portfolio requirement at this level nor are there any pre-requisites for this class. The majority of the students are from North Carolina; approximately half come from rural areas. The remainders of the students come from the northeast states, most from urban areas. Entering foundations students exhibit highly diverse levels of skills and experience. Some have taken secondary-level classes in interior design and art and may be versed in basic CAD or Photoshop. Others have no prior training in any of these areas and some have very rudimentary computer skills.

Course Description

Project-based learning is the foundation of this interior design lab course that represents the practical application of concepts presented in a parallel lecture course. Students develop proficiency in practical manual skills with basic two and three-dimensional design applications. The course focuses on an authentic design project that emphasizes the creation of safe, healthy and barrier-free environments. An innovative model of interprofessional undergraduate pedagogy has been developed that combines the disciplines of Interior Design and Health Sciences in a service-learning model of instruction that addresses safety and health issues among rural disparate populations. The social and environmental context of design provides an opportunity for real-world creativity that meets the aims of the clients. The parameters of this model reflect a developmental approach appropriate to a fundamental level of instruction. The service-learning design project imbedded in the course provides a broad-based introduction to the process of interior design while supporting real needs of the community.
**Method: the use of technology**

Multiple strategies were developed to integrate technology as a relevant vehicle for improving student outcomes. With the collaborative instruction provided by the technological expertise of the student support center, students were introduced to Second Life and provided an “avatar” and access to the university’s virtual campus. Basic instruction in photography and photoshop facilitated digitizing student work. In a re-creation of the department’s building, students imported their digitized design projects and submitted them to virtual galleries. Each display board in the virtual galleries represents an individual student’s work. By pointing and clicking on the image, a series of examples of that student’s projects is displayed sequentially. The virtual galleries were color-coded to signify class sections. Figure 1 shows a view of three gallery walls color-coded by the circular carpets to indicate class sections.

![Color-coded gallery displays of student work. (Image and gallery construction by Tracy Giordano)](image)

As student input expanded through the course of subsequent semesters, sections were collapsed and coding was transferred to a semester basis for prior work. This functioned as a digital catalogue of prior semesters’ work that provided visual references for design development. The examples facilitated the clarification of expectations and elevation of standards. Students had an enhanced understanding of the scope of projects, expectations were clarified, and standards were raised. Peer review note cards serve as assessment tools. The cards are posted below each student’s gallery site. While any other student has the ability to enter a peer review, retrieval of comments is restricted to the professor and the student under review. Figure 2 shows an example of an individual student’s display board with a peer review drop box below.
Figure 2: Individual student’s display board with peer review drop box. The entry reads, “I really like this collage! The artist constructed a great use of continuity throughout the piece and having the rope wrap around the top and having certain objects pointing directions to create movement. I also think the artist created good balance with the stripes on the left and the picture and branches on the left. Great job!”

(Image and gallery construction by Tracy Giordano)

Students were able to meet in Second Life via their avatars to discuss design projects. Students also met as a group of avatars with the instructor or with the Second Life technology trainer. For distance presentations by the instructor, student avatars met in a lecture hall at another location on the East Carolina University virtual campus. Figure 3 shows one of the lecture halls that were constructed on the virtual campus.
Figure 3: Lecture hall created on the East Carolina University virtual campus shown with students attending a lecture by the professor via their avatars.

(Image and gallery construction by Tracy Giordano)

A separate room displayed portfolios of each student’s work from the semester. Compiling virtual portfolios served to develop organizational skills and marketing strategies. Here, students’ work was initially displayed on levels corresponding to the color-coded class sections. Figure 4 shows examples of student portfolio displays.
Figure 4: Color-coded portfolio displays of student work divided by class sections. (Image and portfolio construction by Tracy Giordano)

Again, as the amount of work expanded with subsequent semesters, sections in the portfolio room were collapsed to represent individual semesters. The gallery spaces with multiple layers of student work represented on display boards was determined to constitute portfolio formats that were duplicated by the separate portfolio room. Consequently, the portfolio room was eventually dismantled to allow for more space for constructing 3-D examples of student design solutions for the community-based projects. Several 3-dimensional representations of project design solutions were initially constructed to full virtual scale. These provided a “walk-through for student avatars to experience and evaluate scale, spatial relationships and design solutions in a simulation of spatial reality. Figures 5 and 6 represent two of these 3-D project design solutions.
Figure 5: Student design solution represented in 3-D virtual reality for an infant and toddler pre-school classroom. (Design by Lorrie Sommerville. Construction and image by Tracy Giordano).

Figure 6: Student design solution represented in 3-D virtual reality for a 3-4 year old pre-school classroom. (Design by Caitlyn Jones. Construction and image by Tracy Giordano).
Review boards were posted outside of the 3-dimensional constructions for outside expert evaluations that could be entered from a distance. Figure 7 shows the review board outside the 3-D room environment.

![Image of review board]

Figure 7: Drop box for outside expert evaluators. Evaluations may be provided for any of the projects in the environment.

The department’s Interior Design Advisory Board members were provided training in Second Life with their own avatars, making on-going distance evaluation possible in an expedient and flexible format. Expansion of distance collaboration and evaluation is being developed that is projected to reach out to national and international cohorts. Procedural instructions that are relevant to the specific activities of this application were provided to both students and outside evaluators within Second Life as well as through digital conduits. Finally, students were taught how to research design ideas and furnishings by accessing professional interior design sites that exist in Second Life.
Relevance

While virtual reality began as a game, it has transitioned to frequent use as a serious tool for pedagogical and professional applications. In the context of upper division interior design programs, Second Life has been utilized for direct design applications. The challenges and limitations of the built environment using Second Life have been analyzed and compared to standard established CAD programs (Clarke and Waxman, 2008) but there are other applications, or variant forms of applications, of Second Life for interior design pedagogy. Students need to be prepared for the new millennium where web sites may be replaced by virtual reality sites. When an institution of higher learning is located remotely from a large professional design community, distance education can be seen in a reverse philosophy where resources and experiences can be brought to the institution via virtual reality. The virtual gallery creates the means by which the community, peers, faculty and distant experts give evaluative feedback for assessing student outcomes. Students have greater opportunity for reflection, collaboration, and development of marketing and communication skills.

This foundations application is referred to as a model because it encapsulates a mode of delivery, studio structure, as well as the pedagogical context in which students and staff interact to facilitate learning. In addition, the model to be discussed can potentially be integrated into a range of interior design units as it provides an adaptive educational framework rather than a prescriptive set of rules.
Bibliography


Juried Teaching Forum

Study Abroad as Field Trip for an Interdisciplinary Service Learning Project
Yaprak Savut
East Carolina University
Kate Carroll
NC State College of Textiles

Purpose

The purpose of this project was to lead Interior Design and Merchandising students in the collaborative design of a contemporary marketplace for a southeastern U.S. university city, which would embrace the tradition of existing European and American market models, and give students a service learning experience as defined by the National and Community Service Act, 1990: “It gives opportunities for students to use newly acquired skills and knowledge in real-life situations in their own communities”. (in Terry, A. & Bohnenberger, J., 2007).

A study abroad experience has many benefits for students in higher education programs. Students experience increases in self-confidence and cultural awareness. Growth in personal development and cultural awareness can be documented in students enrolled in a variety of programs. Black & Duhon (2006) found increases in cultural awareness and personal development among twenty-six business students from the University of Southern Mississippi who were participating in a month-long, summer study abroad program based in England and who were studying a variety of subjects.
Gaining exposure to different ways of living and working together is another benefit of the study abroad experience. In the current project, three faculty members from different disciplines initially brought the concept before local authorities with the purpose of increasing economic activity and assisting in the revitalization of the downtown business area. The marketplace was considered a meaningful project, because of its significance as a centuries-old center of human economic activity, with merchandising at its core. Students were expected to explore the history, modern interpretation, types of products, and community value of this traditional model for distribution of goods to consumers, and re-interpret it with modern design elements, focusing on a modular system of design (see Figure 1.). Merchandising students were expected to conduct a strategic analysis of potential outdoor sites in Greenville to determine an optimum location for an actual market involving local merchants, and assist them in developing product assortments, pricing structures and promotional activities.

Assisting in the revitalization of the downtown area and working on a project that would give city-dwellers the opportunity to interact with regional vendors also incorporated a service to the community component. The two disciplines of Interior Design and Merchandising were considered essential components of the project. Interdisciplinary work is increasing in higher education (DeZure, 1999; Creamer, 2005) and benefits can also be found in the study abroad situation. In the University of Georgia’s West Africa program, students from a variety of academic fields are placed into interdisciplinary teams to work on service projects and bring different outlooks to those projects.
Method

The faculty members identified two countries (Italy and Turkey), which would provide the students with an opportunity to observe and experience traditional marketplaces. The trip was designed to begin with a week-long stay in one of the most historic yet modern market centers in Europe – the vibrant city of Milan (see Figure 1) in northern Italy, and then to extend the experience further east to the traditional and modern meeting point of Western and Eastern cultures – the country of Turkey. The Northern Italy portion of the trip was designed to include visits to showrooms, museums, and factories in the Milan area, plus day trips to silk mills and showrooms in the Lake Como region, and other historically significant Northern Italian cities, such as Turin (see Figure 2) and Venice. The Turkey portion of the trip was planned to include; Istanbul with Historic Peninsula, Grand Bazaar, Herb Bazaar, and the outdoor market at Ortakoy; Bursa with its silk mills and other textile factories, Ephesus with Sirince Village and its outdoor market; and Cappadocia.

The instructors planned an itinerary around these visits and then announced the project to students from the relative subject areas: Interior Design, Interiors Merchandising and Apparel Merchandising. Participating students were required to take two of three courses offered, totaling six semester credit hours at the end of the program: Interior Design II: Commercial Design; History of Interior Design, and Special Topics in Merchandising. Sixteen students signed up for the program, and carried out preliminary work in three pre-trip sessions during the spring semester focused on trip logistics, content and context, and team-building (see Table 1). In the summer vacation
period prior to the trip, students were asked to complete assignments in preparation for the trip, such as finding and analyzing a variety of market spaces in or close to their home town, so that comparisons could be drawn between US sites and those in Italy and Turkey (see Table 2). Even through cultural immersion is one of the main benefits of the Study Abroad experience, cultural immersion can also take place within the home country. A suburban Philadelphia college takes students to New Orleans for both cultural immersion and service learning post-Katrina. Students learn valuable lessons in working together, by finding out what everyone brings to the table when put into a community, not just through their own experiences, but also through learning about the historical groups who have settled in New Orleans over the years (Luquet, 2009).

During this pre-trip period, student teams stayed in touch through Virtual Classroom websites and learned about each other through Internet activities. All the work that the students performed for the project, before, during and after the trip, was team-based, and involved one Interior Design student working with one Merchandising student. Clark, Grunder & Hardee (2007) also used teams from Santa Fe Community College successfully to develop Integrated Learning Communities into Study Abroad using a Sister City approach.

During the study abroad component, faculty members were able to observe the progress of the interdisciplinary groups as they collected information in preparation for their marketplace design (see Table 3). Active documentation throughout the trip, such as daily journals, presentations, tours and visits, strengthened this learning component. Unfortunately, due to suspected terrorist activity in Istanbul the day before transition
from Italy to Turkey, the second week of the trip had to be cancelled due to safety concerns. Upon return to the U.S., students worked in the studio for two weeks, building models and compiling merchandising plans in preparation for a presentation to university dignitaries, city officials, NGO representatives, the chief accessibility code consultant, and students’ friends and family (see Table 4). Each team gave a PowerPoint presentation of their work, showed their models and drawings and discussed suggestions for further development of the project. As an outcome of these efforts, the city and the NGO started a series of discussions about realizing one or a combination of more than one of these projects at the determined historic district.

Program outcomes

During the 11 week course period, the interior design students learned critical thinking in active observation hours by sketching and explaining the influence of design principles and theories in a Human-Environment relationship both in the U.S. and in Italy. During the trip, they experienced the atmosphere which was created hundreds of years ago not only as designers but also users. Finally, they transferred the most appealing aspects of the marketplaces in their own designs (see Figure 4. and Figure 5.). They improved their knowledge about detailing the projects and combining their desires with the input they got from their merchandising team-mates. They learned to compromise in order to reach the optimum solution, which was very similar to a real life design experience.

The merchandising students learned how to examine a non-traditional retail structure and bring that concept back to their home country. Working with the 4 P’s of
merchandising: Product, Placement, Pricing and Promotion (Kunz, 1998), students learned that these principles cut across geographic borders and cultures, but retained their importance to a successful retailing experience and operation. Their teamwork with the ID students made them mindful of the importance of design and spatial layout in terms of connecting with the environment, the vendor and the consumer.

**Importance of topic**

As faculty members, it was important to see how students matured in their responses to the academic and practical problem. This ‘giant field trip’ provided students with real-life solutions from which they were able to borrow. In addition, by working through problems together on collaborative projects, there was a positive effect on their own self-confidence in problem-solving, and their ability to work in an interdisciplinary environment. Providing a valuable service to the city in the form of a viable plan for an interactive public space gave students the opportunity not only to see the reality of their learning but also give something back to their community. This Service Learning component has been used successfully in other study abroad programs (Lowe, Dozier, Hunt-Hurst & Smith, 2008).

**Relevance to Interior Design**

This project was significant among previous departmental projects. Students were able to apply what they observed during a study abroad trip which Asojo (2007) named as “the inclusion approach”, work on a service learning project which was “the contribution
approach” (Asojo, 2007; Grant, 1991), focus on one design project throughout the summer, and learn different aspects of commercial design in a setting where interaction with students from another discipline was encouraged which was “the transformational approach” (Asojo, 2007; Grant, 1991) in introducing the diversity in design education.

References:


*Figure 1.* An example of a modern modular market space in a traditional English market town: Farnham, England
Figure 2. Students had the opportunity of observing different malls like Galleria Vittorio Emanuele -Milan, Italy.

Figure 3. Students also actively observed the Marketplace in Turin, Italy.
Figure 4. A site model of one of the teams.

Figure 5. 1”=1’0” scale permanent shop model of the site plan in Figure 4.
**Table 1 Pre-trip sessions**

<table>
<thead>
<tr>
<th>Pre-Semester Meeting</th>
<th>Topic:</th>
<th>Content:</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>General Introduction and Logistics</td>
<td>• Country orientation</td>
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<tr>
<td></td>
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<td>• Safety issues</td>
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<td></td>
<td></td>
<td>• Packing tips</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Financial issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sample menus and Cost of food</td>
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<tr>
<td>II</td>
<td>Introduction to European Markets:</td>
<td>• Historical context</td>
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<tr>
<td></td>
<td></td>
<td>• Industry Structure</td>
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<td></td>
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<td>• Product Development</td>
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<td></td>
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<td>• Manufacturing</td>
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<td></td>
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<td>• Distribution &amp; Sales</td>
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<tr>
<td></td>
<td></td>
<td>• Consumer and Promotional strategies</td>
</tr>
<tr>
<td>III</td>
<td>Team Building:</td>
<td>• Researching Turkish and Italian culture</td>
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<tr>
<td></td>
<td></td>
<td>• Creating a banner for the trip</td>
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<tr>
<td></td>
<td></td>
<td>• Completing a project about fashion in the two countries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Completing problem-solving exercises in small groups</td>
</tr>
<tr>
<td>WEEK</td>
<td>Interior Design Students</td>
<td>Assignments</td>
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<tr>
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</tr>
<tr>
<td>I</td>
<td>Observe different marketplaces in and around home towns</td>
<td>Minimum three hand perspectives for each session</td>
</tr>
<tr>
<td>II</td>
<td>Share observations, learn about the project site</td>
<td>Measure the site</td>
</tr>
<tr>
<td>III</td>
<td>Meet with three presenters from the NGO and learn about their vision</td>
<td>Develop merchandising plan</td>
</tr>
<tr>
<td>IV</td>
<td>Research historic downtown</td>
<td>Develop a design concept and share with merchandising partners</td>
</tr>
<tr>
<td>V</td>
<td>Program development</td>
<td>Determine: Characteristics of user group, Active/Passive activities, Required sq ft for each of the activities</td>
</tr>
<tr>
<td>VI</td>
<td>Meet with the Chief Accessibility Code Consultant from the office of the State Fire Marshal, Department of Insurance, NC</td>
<td>Complete the requirements of first public presentation.</td>
</tr>
</tbody>
</table>
### Table 3 Study abroad activities

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TASKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Interior Design Students</strong></td>
</tr>
<tr>
<td>VII</td>
<td>Trip to Northern Italy</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>WEEK</th>
<th>Tasks</th>
<th>Interior Design Students Assignments</th>
<th>Submittals:</th>
<th>Merchandising Students Assignments</th>
<th>Submittals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII</td>
<td>Improve and detail the design solutions that were developed before the trip.</td>
<td>Prepare the requirements of final presentation: Revise the previous designs and add new drawings and models as required.</td>
<td>Revised: Site model (1&quot;=10' scale), Site plan (3/32&quot;=1' scale), floor plans of the management office building and the public restrooms (1/4&quot;=1'0&quot; scale), reflected ceiling plans of the management office building and the public restrooms (1/4&quot;=1'0&quot; scale), four elevations from management office and public restrooms (1/4&quot;=1'0&quot; scale), material boards, furniture and finishing schedules.</td>
<td>For the proposed marketplace in the U.S. city, perform the following: Site analysis: Pedestrian traffic Vehicular traffic Parking Infrastructure Visibility Competition Potential target market</td>
<td>Revised merchandising plan for city marketplace</td>
</tr>
<tr>
<td>IX</td>
<td>Improve and detail the design solutions that were developed before the trip.</td>
<td>Prepare the requirements of final presentation: Revise the previous designs and add new drawings and models as required.</td>
<td>Revised: Site model (1&quot;=10' scale), Site plan (3/32&quot;=1' scale), floor plans of the management office building and the public restrooms (1/4&quot;=1'0&quot; scale), reflected ceiling plans of the management office building and the public restrooms (1/4&quot;=1'0&quot; scale), four elevations from management office and public restrooms (1/4&quot;=1'0&quot; scale), material boards, furniture and finishing schedules.</td>
<td>Product Analysis: Model stock plans Product trends Pricing Visual merchandising</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Complete the project with final presentation. Work with your team mate to get ready for the final presentation.</td>
<td>Work with your team mate to get ready for the final presentation.</td>
<td>4 bound copies of market plans, presentable to the City, the merchant, the instructor and the student team</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


iii Ibid, 107-150.

Students Abroad In Italy
Shari Park-Gates
Paula Frances Peek
Auburn University

Design problem, program, objectives and outcomes

A land grant university planned to redesign a portion of a palace in Italy in order to accommodate twenty students in a semester abroad program. The design problem was an adaptive reuse project. The task was to design the home and classroom facilities for a semester abroad study experience for twenty university students. The space is a portion of the Palazzo Savelli Chigi which was originally designed by Bernini and built by Augusto Chigi in 1740. The main part of the palace is used as a museum and has been photographed for international historic movies and television. The palace has very thick stone walls, high vaulted ceilings and brick and tile floors. The budget although limited allowed for meeting basic needs, developing a certain level of ambiance, and respecting the architectural character of the palace. The time frame for completion of the project was approximately six months. The project is at a level of completion which allows for occupancy by the students. However, some lighting, furniture, floor finishes, artwork and accessories are on hold because of funding difficulties.

After interviewing the dean of the college the head of the Italian program and returning study abroad students about their needs and goals, a brief program was proposed. The space was to serve as a home away from home for twenty students for a semester. In addition, space for classroom facilities, a teaching kitchen, and dining facilities were to be included in the plans. Wireless computer and internet access were a must in every space. In response to the program the design was a balancing act between respecting the history of an Italian palace while meeting the demand for a comfortable, flexible, functional, and safe environment for contemporary students studying abroad. Flexibility and durability became large components in the concept. Students who were interviewed mentioned the lack of privacy as a number one concern.

Four large rooms or "suites" were allotted for sleeping quarters. Tall ceilings allowed for lofts and open stairwells to be built. This allowed for more students. Twin size beds were designed with casters so they could be easily moved. Storage was designed below and above beds to accommodate books, folded clothes and a small fold down desk area which locked for personal storage when closed. Beds were designed to be sofas in the daytime. Armoires were designed to be the same height as the bed storage and were also mobile. These units were designed to respond to the request for privacy and could be configured to give privacy, a sense of ownership for the student's personal space and were referred to as nests. Each student had their own nest, a sort of home away from home which offered seated cozy privacy and personal flexible lighting to be controlled by the student. Lounge seating in the sleeping space also had casters and was designed with removable computer tablet arms. Strange alcove areas under the windows were fitted with pillows so that students could curl up under the high windows and read or just nest. A mobile computer table and floor lamps on casters were also provided in each "suite". For wayfinding purposes each of the four suites was named after a region in Italy and signage was designed with the expression of that area in mind i.e., the "Roma Suite". All areas were planned with mobility and flexibility. The dining area tables have casters on two legs so they can be easily reconfigured and the chairs are all stackable. Lighting will be installed to highlight large photorealistic artwork which will depict foods grown in Italy. The kitchen has commercial grade appliances and demonstration spaces designed into the layout. Old wine presses will become areas to store and display Italian wines, fresh fruits, and vegetables.
The classroom space has stacking chairs with removable tablet arms and several folding tables with casters on two legs as well so the space can be set up for lecture or roundtable discussions. With the addition of some table cloths, banquets could be held in this space.

The lounge has oversized comfortable but flexible seating. The artwork planned is to be a combination of faculty artists and student work. The student work will be rotated and competitions will be held to make selections. Art work and special lighting will line the wide hall ways and viewing benches will give this area the feeling of a museum. Faculty artwork will be focused on Italian architecture and Italian landmarks.

This design is a work in progress so many other creative solutions designed to address the needs of the clients and users will be presented at conference.
Juried Creative Scholarship
Interior Design Category

Haptic Representation
Ricardo Navarro
Miami International University

This is a conceptual project that pays tribute to the late Eleanor Raymond. The site for this project is the location of one of Eleanor Raymond’s first modernist homes in the Northeastern part of the United States. The demolishing of this house is the catalyst for this project.

Haptic relates to touch. As the project created by Eleanor Raymond does not exist due to its’ unfortunate removal. Through haptic interpretation of materials, shape and line, this project creates a representation for viewers to identify with and decipher as they experience the space through the design of both the exterior and interior. The project was a conscious effort to memorialize, in contemporary terms, what was once there. The design concept was to use the existing design vocabulary of the previous home designed by Eleanor Raymond coupled with sustainable design approaches of today to create a design that minimizes environmental impact and uses shape and form to delineate the designs connection with nature.

The connection with nature began the process of design. A series of sketches first identified how to use shape and form to symbolize the past and the present. The past is represented by the wood cladded areas where homage to Eleanor Raymond is paid through shape and line. The present is mostly represented by the use of the shifted plain constructed out of glazing. These sketches were then developed with a clearer understanding of how to connect the conceptual project with nature still enhancing the concept of the past and present. For example, the past is viewed through a series of louvers in the bedrooms and private areas. These louvers act as the gateway to the past and also act as energy efficient louvers to diffuse direct sunlight, but still allowing the light to enter with interesting shadows throughout the day. The present is viewed through large glazing panes which create a feeling of openness with nature. The public spaces are the spaces which have access to this space, reinforcing the connection with nature and the present for everyone who visits the home. The use of a two story space coupled with the large shifting plain allowed for exciting volumetric design opportunities. This is expressed by the loft office area design. The small footprint (a modest 2550 sq.ft.) was maximized while still developing excitement, and a connection between past and present through shape, form and materials.

The use of the living standards allowed the designer to address 5 categories in this project.

1. Site Design
2. Energy
3. Materials
4. Water
5. Beauty and Inspiration

The designer addresses these basic principles in the design of Haptic Representation through materials (for example the stone wall), shape (the shifting planes), and line (the rectilinear lines in the exterior and within the interior). The sustainable standards supplied the designer with rigid principles to meet the needs of today’s ecological concerns.
The past was the catalyst to create and incorporate aesthetics, technology, nature, and memory. The design showcases the rectilinear forms depicted by Eleanor Raymond's original work, however the interior showcases the inspiration nature has to offer in design, nature is a healing tool and must be exposed and incorporated.

1. Insulated concrete forms increase energy performance.
2. PVC throughout roof.
3. Custom louvered system to allow for controlled daylighting.
4. Double insulated glazing to minimize heat gain but still providing views of the natural environment.
5. PVC screens developed on the south elevation.
6. Local Barberry plants.
7. Roof garden.
8. Trombe wall heating devices (energy is collected at this point and transferred underground into the stone which creates the interior staircase.
Juried Creative Scholarship
Interior Design Category

Sustainable Home Treasure Island, Florida
Marilyn Whitney
Savannah College of Art & Design

Sustainability

The parameters of Cynthia Faulhaber’s new home in Treasure Island, Florida were to be as sustainable as possible, while incorporating her design aesthetic. The synergy of the design team and contractor allowed the individual skills the team members to solve the myriad of problems for the best solutions. Cynthia gave each designer working on the project freedom to expand his or her knowledge of sustainable design, explore the aspects of that design, and to break confines of codes and sustainability. The home received a -9 rating from the Home Energy Score (HERS) and feeds energy to the grid.

Interior Design

The design concept was concentric circles contrasting the angular planes of the architecture. With the myriad of products touted as sustainable, finding sustainable materials that were available, attractive to the client, and able to perform as advertised was challenging. The interior had to unify the sustainable architectural materials, with the interior finishes, and incorporate Cynthia’s existing furnishings for an integrated whole.

Universal Design

The 2,567 sq. ft. of conditioned space offers Cynthia a universal designed interior that complements her current active lifestyle with room for frequent visits from children and grandchildren. In addition, it allows her to age in place with her daily need met on the main floor. The compact kitchen has a custom height counter top of 34”. She has a high sensitivity
to bright light. The use of LED lighting throughout the home allows her to dim the brightness. It also allows her to alter the color rendition, and uses 1/10 the electricity of incandescent.
Visual Arts Category

Creation of Spatial Disparities in the Perception of Architectural Structures:
the effects of light on color and form.
Susan Martin Meggs
East Carolina University

Medium: Colored pencil and oil pastels on watercolor paper with wood framing and sample blocks

ARTIST'S STATEMENT

GOALS

The goals for this creative activity are to compare the effects of light on color and structural elements to enable a manipulation of perceptual boundaries.

DESCRIPTION

The images in these series are abstractions of cityscapes that are deliberately unfocused with diffused light that suggest multiple interpretations of form and perception of space. Consequently, the images are universal in their implications of associative responses. The large oil pastel series and the conceptually related small color pencil series incorporate architectural structures and elements as affected by light and/or atmospheric or weather conditions. They illustrate the abstraction that occurs on a viewer's perception of architectural form when these influencing factors are applied. The perspective, architectural forms, and other effects of these influencing factors, particularly light, are important considerations as well in the visualization of interior environments. Some of the series are exterior views, while some illustrate the interaction between interior and exterior views with an emphasis on either the exterior or the interior. The conceptual foundation is consistent with my mode of expression, especially an emphasis on composition, the application of media calculated to reveal visual disparities, and the interpretation of content to emphasize this particular visual effect.

METHOD

The interpretation of content is further manipulated by creating a physical layering of elements, an aspect difficult to perceive in a digital format. The small compositions are layered in a shadow box-like structural framework that consists of an outer frame, recessed inner drawn frame, a projecting wood block (from an interior design sample piece) and the central drawn image. The images are contained, layered, and framed, further playing with spatial perceptions but also suggesting a voyeurist's view, like looking through a peephole into an expanding space beyond. The abstraction is enhanced by the interplay between exterior/interior environments created by the structural layering. I built the complex multi-leveled frames; they are composed of three frames fitted together. Larger formats of the same images eliminate a shadow box while still concentrating on essentially the same visual effects.

CONCLUSION

The results of this visual inquiry that I continue to explore indicate that where light is extreme, either dim or diffused with soft shadows, or harsh with sharp shadows, the effect is similar: a flattening of volume, loss of differentiation of planar surfaces and abstraction of the perception of depth. Further, the quality of light relative to the environment effects our spatial perception. This can depend on the time of day,
latitude, time of year, temperature, and weather as well as reflective agents such as bodies of water, humidity, terrain, and vegetation (or lack thereof).

Chinatown with Radiator
Colored pencil on paper; Wood.
Juried Creative Scholarship
Visual Arts Category

Creative Human Intelligence Program [CHIP]
Hannah R. Mendoza
UNC Greensboro
Jonathon Anderson
Savannah College of Art & Design

The design process as a function of creativity has been the focus of a great deal of scholarly attention and has remained elusive not because of some divinity of aspect but "simply because these processes lie outside the bounds of verbal discourse: they are literally indescribable in linguistic terms" (Daley, 1982). The language of thought process may not the same as verbal language, i.e. English, Japanese, Albanian, but rather a series of marks; a language of imagination and imagery (Pinker, 1997). As a part of a larger process of understanding creativity and insight, the authors asked what impacts a visual representation of process might have on understanding without resorting to verbal translations.

In addition, the authors wanted to examine the generative potential of the creative process as an end in and of itself and the product as secondary. Often, individual creativity is assessed retroactively by examining an end result (Cowdroy & Williams, 2006). The process of generating the design itself is examined in this project and used as the product through the mapping of creative interactions onto a physical frame. The problem was approached by generating a set of system parameters that became an expression of an individual's creativity. The authors first compiled a list of words describing mental, emotional, and physical states that have been used in literature on the design process and creative thinking. Each one of these words was then attached to a mechanism that could be pulled or pushed by the subject as they worked through a simple problem requiring creative thought. The mechanisms were attached to a material, which was hidden from the eyes of the subject and that was deformed in relationship to the manipulation of the available mechanisms. The subjects were instructed to push or pull based on their experiences of the various states during problem solving and at the moment of the "creative leap."

The resulting form provided a three dimensional model of the experience of creativity. Rather than utilizing this information in order to determine the basic components of creativity, the emphasis is on the individual nature of interaction between person and problem, free from focus on production as the goal. This dynamic design system begins with the self-study of processes at work within a set of parameters. The prototype model is being used to inform the creation of a computerized system known as the Creative Human Intelligence Program (CHIP) in which the interactive information is converted to an algorithmic format to produce a datascape. Once the scripted programming maps the design, the computer generated data is output through g-code. The marriage between the human brain and digital formatting transforms the state map into a design system expressive of the creative process. This code determines the physical creation of the design through digital fabrication technologies. The computation of this design system is parametric and dynamic and allows for a tangible design to be re-interpreted based on evolving creative experiences.

These 3D state maps, once fabricated, become mutable components of surface systems that allow intensely personal spatial organization within the built environment. The products created with this program could be utilized as objects of art in and of themselves but also could be integrated into spaces as articulating elements. In addition, the forms could provide inspiration for flat pattern designs or function as design drivers for furniture and interior spaces. The visual manifestation of individual process could serve as an inspiration during concept development and the path to the creation of personalized design so highly desired in contemporary society.
Juried Creative Scholarship
Visual Arts Category

The Pond
Saral Surakul
University of Georgia

Medium: Computer Animation

Every fine afternoon on the weekend when the sun was bright and the cool breeze was in the air, I found myself sitting by the pond near my house watching the world slowly went by. The reflecting surface of the water was occasionally disturbed by a school of small fishes and tadpoles. The shady trees that canopied above the area formed a small world where its dwellers were nothing but small living creatures. Life was peaceful back then.

My works is an expansion of a short moment. Time moves slowly, almost frozen at times. The story is captured and told. Through my imaginations, things are distorted and abstracted. Familiar things do not necessarily appear in their usual forms. The pond is the reminiscence of my childhood memories. Spending times observing various forms of life in this small habitat, I was fascinated by the equilibrium of nature. Similar to any eco-systems, there are predators and preys. If we can maintain the balance, both can beautifully coexist. Likewise, human and their environment s need the same mechanism. We give some and we take some. This will allow us to be able to pass on the similar wonderful experiences with nature to generations to come.
Guarding Windows
Meng’Kok Tan
University of Georgia

Medium: Digital Print on Satin Paper (36” x 24”)

Artist Statement:

This piece of work is an illustration of a series of iron grille windows. It is a collection of images captured from different main entry iron doors to each individual houses. These iron grille windows served the function of protection and security which provide the first point of contact with visitors at the door. It also allows the house residents to get a glimpse of the street at the front of the house. It is also used to carry out conversation or transaction with street vendors through these small windows.

It was during a trip to Turkey several years ago that I have noticed and observed the many cultural, social, and economic influences on Turkish social lifestyle that reflected upon Turkish architecture. I have learned much about the traditional as well as modern Turkish house by simply identifying with everyday common occurrence and observation of the house style; basic form and structure, colors, texture, motif, décor, etc. The iron grille window is one of such discovery. Though the design and pattern may seem ordinary with the use of basic geometry with repetition, symmetry and balance, but for some the originality of it has deep historic influence as I was told by some local elders. Some of these grille patterns are simplified while others are more elaborate with most inspired by floral design. However, such design and patterns are still commonly found in houses both in remote villages and in modern apartments in the cities.

Some aspects of these windows that I found intriguing are the application of colors, their form, shapes and size, the formulation of patterns, and the less than perfect workmanship. Some grille patterns may not necessary be well aligned but calculated enough to fit within the dimensions, and as long as it serves its purpose. It was with the same approach that I have manipulated and formatted the images to fit within a layout that symbolically represents an
Islamic styled window with the two motifs at the top acting as clear openings. Such openings are commonly found in traditional Turkish houses for the sole purpose of ventilating the house. My intent is to put together an assembly of iron grille windows showing the different types of iron work and patterns as a visual interest to be viewed collectively. It is also to draw meanings to the style and design of such iron grille windows that are still widely used today.
Juried Creative Scholarship
Visual Arts Category

At the Interface
Brad Whitney
Virginia Tech

photography and digital processes  2009-ongoing

I have learned to keep my senses open to better understand my own place in this world...my own humanness. With my senses open, I see more readily the complex relationships at play in the world around me. These relationships are subtle yet they tell stories that are surprisingly rich. Sometimes I find that the simplest aspects – aspects often overlooked when I’m in a hurry – give rise to the most amazing insights.

One evening while observing my aquarium, I was drawn to the constant shifting of colors moving across the aquarium’s surface. It was mesmerizing to see the light dance across the surface! However, looking past the surface - actually, to what lies beneath the surface - I began to also notice that the aquarium's inhabitants were in a constant state of unexpected change too. The fish and invertebrates were continually morphing in form and color. One moment I was just an observer like every other night, the very next moment I was a witness and then participant to an interaction between two seemingly opposing forces or properties. In turn, this sparked a new awareness about the world around me and drove me to compile this body of photographic work. This body of work documents the forces of energy, light and motion interacting on what I like to call the interface. Simply put, I’m an artist having fun with \( E=mc^2 \).

This series of photographs captures the beauty found in complex modulations between light, color, shape and line that occur across liquid surfaces. Be it glass or water, this interface is continually moving and toying with us as illusions of past, present and future all collide in one single instant. These images capture what happens when properties of water, air and light intermix. At first glance, they unveil rich and marvelous moments of reflection, refraction, permeation and diffusion. In some images, it is my hope that when one looks more closely human and animal like figures begin to emerge. In other images, I hope to convey space and time in one single instant – the place where memory and dreams depends on one’s position to them.

As I worked on this project over the last several years I searched specifically for telling subjects to photograph. Some photographs I left as I took them while others I digitally played with to bring out the subtle details that I was searching for. The process continues to usurp several naïve assumptions I had: that properties of air and water work to form principles of yin-yang; the action of light playing between liquid and space reflects the constant state of flux all of us are in; that everything (breathing or static) share in common a make up of fundamental compounds and molecules; and that the boundary - the "surface" that separates or defines one from another – is the interface between two worlds where peering out or peering in is only a perception based on position.

As in daily life, what really lies beneath may truly differ from what is seen from above. Each one of us at any given moment interacts through one sort of interface or another. I believe it is in gaining deeper understanding on the nature of those interfaces that will help us further our own insight on what it means to be human.