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October 15-16

**Together Towards Tomorrow:
Design Education
Transformation**

Proceedings

Bowling Green, Kentucky



Minneapolis, Minnesota





IDEC Midwest Regional Conference 2010, **October 15-16** Together Towards Tomorrow: Design Education Transformation

CONFERENCE PRESENTATION SCHEDULE Friday, October 15

Presentation Site Locations (MN – Minneapolis & WKU – Western Kentucky University) – Interactive Video Conferencing

9:30 – 10:00 Presentation

(MN) Preparing Future Evidence-Based Designers--Among Other Things
Caren S. Martin, University of Minnesota

Preparing Future Evidence-Based Designers—Among Other Things

Purpose

Evidence-based design (EBD) is increasingly discussed in design practice as an approach to determine a design solution that is based in “evidence.” EBD is also a Student Learning Expectation within the CIDA 2009 *Standards* (2008). Educators must prepare future interior designers to meet this emerging, critical approach to design while retaining balance with other design approaches and theoretical constructs. Pedagogical issues and an integrated approach will be discussed.

Background

EBD is defined as “The practice of grounding design solutions and decisions in a researched and documented knowledge base that includes the analysis and interpretation of research” (Stewart-Pollack & Menconi, 2005, p. 236). Since 2008, numerous books about EBD have been published (see Table 1). The trade press is also discussing EBD. In IIDA’s *Perspective*, “The Future of Evidence-Based Design: It’s Not Just for Healthcare Anymore,” experts speak of healthcare designers’ EBD-focus and describe their engagement in EBD as method by which to create design solutions that are based in research findings and evaluated via measurable goals (Whitemyer, 2010). They encourage—and perhaps even warn practitioners of other design specializations that EBD is critical to their personal practices’ future.

Practitioners also find engaging in EBD a challenge (Hamilton, 2010; Zborowsky, 2010) in terms of its integration into the design process and should be combined with the design practitioner’s experience and creativity (Martin, 2008). “Ways of knowing” are discussed by Pable (2009) as she advocates for *a priori* knowledge; knowledge that is subjective, springing from intuition or emotion and associated with creativity and originality. Exposure to these diverse viewpoints provides a basis for an essential, critical examination for practitioners and students.

Relevance to Interior Design Education

While EBD gains ground with practitioners, it is an educator’s responsibility to teach future practitioners about EBD, given current economic, social, environmental, and cultural challenges. Also, familiarity with EBD affords students an opportunity to bring valuable knowledge into their future places of employment.

Classroom experiences and assignments can enable students to understand EBD principles, identify EBD tools, and engage in EBD via application to a project. Moreover, students should be able to determine how and when application of the EBD approach is appropriate. Also, a graduate EBD course having students from multiple design disciplines and from various graduate degree levels (MS, MArch, PhD) in addition to design practitioners (non-degree seeking) creates an enriching experience for all participants.

This presentation will focus on a multidisciplinary graduate level seminar course. In part, the course objectives were to 1) gain a basic understanding of research vocabulary and methods, 2) understand the origins and principles of EBD, 3)



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explore the advantages/disadvantages of EBD as a process as compared to a “best practices” design process approach, and 4) develop an EBD-approach for a project in the student’s area of design specialization. Student outcomes will be shared to show the breadth and balance of an EBD approach across design specializations. Students noted that an understanding of EBD allows them to be better problem solvers and enhanced their design solutions.

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Table 1. Partial list of evidence-based books published since 2008

- A Practitioner's Guide to Evidence-Based Design (Joseph et al., 2008)
- A Visual Reference for Evidence-Based Design (Malkin, 2008)
- An Introduction to Evidence-Based Design: Exploring Healthcare and Design (Kent et al., 2009)
- Design for Critical Care: An Evidence-based Approach (Hamilton & Shepley, 2009)
- Evidence-based Design for Healthcare Facilities (McCullough, 2009)
- Evidence-Based Design for Multiple Building Types (Hamilton & Watkins, 2009)
- Evidence-Based Healthcare Design (Cama, 2009)
- Evidence-Based Design for Interior Designers (Nussbaumer, 2009)
- Informing Design (Dickinson & Marsden, (Eds.), 2009)



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10:15 – 11:15 Presentations

(MN) Integrating healthcare design research into practice: Setting a new standard of practice
Terri Zborowsky, Lou Bunker-Hellmich, AECOM

Integrating healthcare design research into practice: Setting a new standard of practice

An important catalyst in the research based design movement was IOM's report, *To Err is human: Building a safer health system* (1999). This document, a report on the quality of healthcare in the United States, noted that human errors were more common than previously thought and the quality and patient safety in healthcare facilities was being compromised. This report, and others written after it, generated a series of initiatives that addressed the healthcare crisis. The role the designed environment played in this crisis was addressed specifically in the IOM report, *Keeping patients safe: Transforming the work environment of nurse* (2003). At the same time these reports were published the Facilities Guidelines Institute, et. al., who co-authored and published the American Institute for Architect's 2006 Guidelines for Design and Construction of Health Care Facilities, began to document the importance of research in the design of healthcare facilities. It is easy to see the convergence of these ideas coming together at the same time. As the notion of Evidence based Medicine (EBM) took hold in the medical community, the notion of a parallel initiative in design, Evidence based Design, EBD, began to take hold in the design community. When healthcare design clients began to understand that research is available to help inform some of the decisions made during the design process—particularly issues that impact a return on investment-- there was heightened interest in this initiative and architectural request for proposals began to include sections on EBD. These combined effects have moved forward the research efforts of the healthcare design community at large, including academia, but also more important to this thesis, the interest of the healthcare design practice community. This presentation will focus on how one design firm has integrated research into their practice.

Key elements of the vision that, we at AECOM, aspire to include:

- focus on rigorous evidence,
- using evidence in design decision-making,
- hypothesize and test relationships between design and patient, family and staff outcomes,
- and, critically evaluate and share results.

Drawing on the work of Zimring (2006) and Hamilton (2004), this presentation will focus on the definition of EBD best suited to a practice based research agenda; define the role of EBD in design decision making and provide case studies from practice. Opportunities and challenges of leading a practice based research agenda will also be discussed, as well as criticism of the movement (Stankos, M., & Schwartz, B., 2007; Upchurch, J. K., 2009). The hope is that in sharing practice based design research initiatives, academia will be better informed about research methods, design and instruments that enhance a practice based research agenda.

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The Facility Guidelines Institute, The American Institute of Architects Academy of Architecture for Health and with assistance from the U.S. Department of Health and Human Services (2006). *Guidelines for Design and Construction of Health Care Facilities*. Washington, DC, American Institute of Architects.

Upchurch, J. K. (2009). Commentary, <http://www.fiercehealthcare.com/story/new-hospital-building-focused-healthy-evidence-based-design/2009-05-19>.

Zeisel, J. (1984). *Inquiry by design: Tools for Environment-Behavior Research*. Cambridge, UK: Cambridge University Press.

(WKU) Work Settings: Generational & Cultural Influences
Cynthia Milota, DePaul University

Work Settings: Generational and Cultural Influences

The world of work is in transition. Alternative workplaces, flexible employment contracts, technology and the workforce, all influence how and where work gets done. Four generations are working in the office for the first time in history noted Lancaster and Stillman (2002). This “aging trend is expected to continue for the next several decades,” indicated Pitt-Catsouhpes and Smyer (2007, p.1). US census data project almost 20% of the 65 year and older population will remain in the work force beyond traditional retirement age (Holder, 2008). Attracting and retaining employees of all ages will be an increasingly significant consideration. The *Gensler 2008 Workplace Survey* revealed “a strong correlation between workplace quality and organizational performance” (Keegan, 2008, p. 10). Generational, cultural and workplace trends will influence the practice of office design.

In light of these significant trends, this presentation will investigate whether the settings in which people choose to work are influenced by generation or business culture. To assist in this examination, the following frameworks require definition: the setting is the *where* of work: office, home, coffee shop; generational definitions, the *who* of work, will be based on the Strauss and Howe (1991) age cohorts; and organizational culture, the *how* of work, will rely on Schein (2004).

A review of the literature finds that most research was conducted on workers within the office confines, with previous researchers intentionally factoring out the alternative workplace variable. This proposed research will investigate the conventional office, in addition to the alternative workplaces which workers have available. While significant research on aging workers in the office was reviewed (Kupritz, 2003; Erlich & Bichard, 2008), only limited information on the younger generations at work was revealed (Lancaster & Stillman, 2010; Johnson Controls 2010). Thus, the proposed research will investigate multiple generations at work. The business of the workplace was factored into these studies usually anecdotally, such as a large financial institution; and cultural factors were rarely incorporated (McElroy & Morrow, 2010). This proposed research will integrate and acknowledge the business sector and corporate cultural characteristics.

Three themes have emerged as significant from a review of the relevant literature and from the practice of corporate office design.

- Human Resources regulations enable alternative workplace practices, allow non-conventional working contracts and manifest the corporate culture in policy.
- Information Technology provides the tools and connectivity to work within and outside the conventional office; is generationally driven; and influences workplace design.
- Real Estate encompasses the workplace design; the influence of location whether urban or suburban; and incorporates business aspects.



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Preliminary research methods have included personal interviews; however results have not yet been systematically evaluated. Future research methods will include additional personal interviews, on site observation and collection of quantitative information from questionnaires and corporate data bases. This presentation will summarize the literature, present preliminary findings and propose issues for further study with the intention to inform corporate office designers of how generations chose their work settings and the organizational cultural implications.

References

Erlich, A., & Bichard, J. (2008). The welcoming workplace: Designing for ageing knowledge workers. *Journal of Corporate Real Estate*, 10(4), 273-287.

This article documents a UK study to investigate the needs of older knowledge workers in one global organization. The research team was multi-disciplinary and the research methods included interviews, group discussions and design interventions. Interior and environmental design researchers, human resources, real estate and facilities management professionals will find this of value. Erlich is a psychologist and consultant to the Royal College of Art in London where she advises on research for design innovation and workplace environments. Bichard is trained as a social anthropologist and is a research fellow at the Royal College of Art. The authors have expanded the Welcoming Workplace study research into a book due out in June 2010, *New Demographics, New Workplace: Office Design for the Changing Workforce*. This very current work exactly reflects my topic area. Two additional items of particular note are: older workers do not want to be singled out which brings negative connotations, and their research did not test to see if younger workers at the same organization had similar issues.

Holder, K. A., & Clark, S. L. (2008, August 2). *Working beyond retirement-age*. Presentation at the American Sociological Association Annual Conference, Boston, MA. Presentation retrieved from <http://www.census.gov/hhes/www/laborfor/Working-Beyond-Retirement-Age.pdf>

This presentation presents US Census data on American's working population past the conventional retirement age of sixty five. These statistics confirm the validity of the multi-generational office topic and provide the additional perspectives of gender, income, education and geographic location. Holder and Clark are researchers, with the Labor Force Statistics Branch of the US Census and are frequent presenters at national conferences. The document includes numerous graph and charts illustrating the data. This summarized information from the 2006 American Community Survey provides data interpretation for use by researchers, demographer, informed business professionals and graduate students.

Johnson Controls. (2010). *Generation Y and workplace: Annual report 2010*. Retrieved from http://www.johnsoncontrols.fi/publish/etc/medialib/jci/be/global_workplace_innovation/oxygenz.Par.41451.File.dat/Oxygenz%20Report%20-%202010.pdf

Johnson Controls, a global supplier of building management, automotive and power systems, sponsored this research project in collaboration with Haworth, the furniture manufacturer and iDEA, the media services agency. Puybaraud and a team of six researchers were responsible for the design, implementation and synthesis of this work. Positioned for the clients of the contributing organizations, the document outlines Generation Y's (Millennial) characteristics and preferences from travel, to the workplace to social networking. The research instrument utilized a graphically pleasing on-line survey of visuals and words to pose the questions. This survey targeted the 18-25 year age group and more than 3,000 participated responded. The data was collected from July- September 2009. While this data is very current, the concept that most of the respondents have not yet worked in an office environment, makes those results skewed to their preferences, rather than based on their actual work experiences. This document will provide valuable ancillary information regarding this age group globally. In addition, the survey instrument will inform my investigations on unique research tools.

Keegan, E. (2008). Why the top tier leverages the workplace. *Dialogue*, 15. Retrieved from http://www.gensler.com/uploads/documents/D15_07_14_2008.pdf

This article is an information packed one page summary of the 2008 Gensler Workplace Survey. Highlights of the survey are categorized into themes with succinct statistics and an illustrative graphic. Although brief, this piece is useful for researchers interested in attaining the results of the survey without reading all 35 pages of the full report. Keegan is a freelance writer often contributing articles to design/architecture magazines.

Kupritz, V. (2003). The effects of physical design on routine work activities. *Journal of Architectural and Planning Research*, 20(2), 110-121.

This study addresses how age impacts older office worker's needs. Kupritz is an associate professor in University of Tennessee/Knoxville's School of Communications. Her research focuses on workplace privacy and communication in the multi-generational workforce. This scholarly journal article relies on data collected from 2001 with a sample of workers between the ages of 35-60. The survey instrument "Beliefs Matrix Questionnaire" (figure 1, p. x) identifies the key workplace preferences in an easy to understand format, however the report relies heavily on statistically ranked data displayed in tables. The findings suggest that the design of certain office features have different importance to older office workers.



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Lancaster, L., & Stillman, D. (2010). *The m-factor: How the Millennial generation is rocking the workplace*. New York, NY: HarperCollins.

Lancaster and Stillman's second book on the generations, *M-Factor* focuses on the millennial generation, born between 1982 and 2000. Written for any business professional engaging with this generation, the book addresses characteristics, transition from life to worklife and managing in the workplace. Similar to their first book, *When Generations Collide*, *M-Factor* combines insightful stories with tales from the front lines. The authors themselves represent two generations, Stillman-Gen X and Lancaster-Baby Boomer. Their company, Bridgeworks, conducts surveys and seminars. They offer generational certification training and speak internationally on the generations. Providing an up to the minute perspective on the Millennials, this timely work gets at the core of this youngest generation in the workplace.

Lancaster, L., & Stillman, D. (2002). *When generations collide: Who they are, why they clash, how to solve the generational puzzle at work*. New York, NY: HarperCollins.

Business leaders, human resources professionals, recruiters, any one participating in a business environment with multiple age employees will enjoy this engaging resource. It defines the generational characteristics, identifies areas of conflict and makes recommendations on how various age groups can best understand and work together. There are many examples told from various age perspectives. The chapter layout allows one to search for specifics such as recruiting, retaining and managing across various age groups. The authors themselves represent two generations, Stillman-Gen X and Lancaster-Baby Boomer. Their company, Bridgeworks, conducts surveys and seminars. This book, a compilation of their research, drills down into generational characteristics, preferences and mind-sets. The numerous, often humorous examples illustrate thinking beyond stereotypes. Note that some of the examples are outdated due to dramatic changes in business climate since this book was written. *When Generations Collide* serves as a definitive guide to the generations at work.

McElroy, J. C., & Morrow, P. C. (2010). Employee reactions to office redesign: A naturally occurring quasi-field experiment in a multi-generational setting. *Human Relations*, 63, 609. doi: 10.1177/0018726709342932

This article describes an office relocation project with generational age and corporate culture components. With regard to generations, their findings suggest that age did not play a role, however perceptions of work culture were favorably impacted by the move to newly re-designed offices. This research incorporates all of the themes of my focus area. McElroy and Morrow are both professors in the Department of Management at Iowa State University with research interests in office design, loyalty, turnover and self-handicapping. Further study of their findings and personal contact with the authors will inform my research.

Pitt-Catsoupes, M., & Smyer, M. A. (June 2007). *The 21st century multi-generational workplace*. Retrieved from http://www.bc.edu/research/agingandwork/meta-elements/pdf/publications/IB09_MultiGenWorkplace.pdf

This Issue Brief from Boston College's Sloan Center on Aging and Work online newsletter succinctly outlines chronological age, generational age, life course and career stage. Written from a multi-disciplinary perspective with numerous citations, it translates the research for business leaders and scholars. Pitt-Catsoupes, the director of the Sloan Center, is an Associate Professor at Boston College Graduate School of Social Work. Smyer is a Professor in the Department of Psychology at Boston College, a licensed clinical psychologist and a clinical geropsychologist. The conclusions from this article inform employers (and interior designers) on issues of aging in the workplace and are pertinent and relevant today.

Schein, E. (2004). *Organizational culture and leadership*. San Francisco, CA: Jossey-Bass.

First published in 1985, this often cited work discusses how the culture of an organization impacts its business. Credited with first coining the term "corporate culture," Schein is a professor at MIT's Sloan School of Management. Schein uses analogies to ancient civilizations when he reports that culture is "easy to observe and very difficult to decipher" (p. 36). The discussions on artifacts or what we first experience when observing a new culture are most applicable to my topic area. Familiarity with Schein's definitions of organizational culture will inform my work as related to office environments.

Strauss, W., & Howe, N. (1991). *Generations: The history of America's future, 1584-2069*. New York, NY: William Morrow.

This scholarly work examines the generations to understand American history and civilization. It describes a cohort group biography, labels and identifies generations before they are born. Strauss and Howe map out generational cycles including dates, demographics, location in history, leadership and sample members. This seminal text is referred to in most major generational research. Its publication date only furthers the currency and relevance as current generations are filling in the blanks the author's left for them. This is the first of several books the pair would write. Strauss, educated at Harvard Law School, is an author, historian, playwright, theater director and lecturer. He has a consulting firm that forecasts generational trends. Howe educated in philosophy at Yale University, is the founder of the consulting firm, Life Course Associates. In addition to writing, Howe is a historian, economist, demographer and national speaker.



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1:00 – 2:00 Presentations

(MN) Integrating the Research of Sustainable Strategies with the Design Solution: A Review on Design Studio Teaching
Shinming Shyu, Eastern Michigan University

Integrating the Research of Sustainable Strategies with the Design Solution: A Pedagogical Review on Design Studio Teaching

PURPOSE

The teaching of an interior design studio is different than that of a conventional class, as it aims to provide educational opportunities for students to learn the process of creating design solutions in response to the given conditions and project requirements. It functions to inspire innovative ideas, encourage inventive explorations, and promote creativity. Furthermore, it serves as the channel to address the urgent environmental issue, such as the sustainability of the global ecosystems and the impact of human building activities. The Council of Interior Design Accreditation (CIDA) requires that “student work demonstrate an understanding of environmental responsible design” (Jones 2008). NCIDQ specifies sustainable design as a component of examination for testing professional design skill and knowledge (NCIDQ 2009).

Therefore, it is imperative for interior design educators to equip the future designers with a keen sense of environmental responsibility and adequate sustainable design knowledge, more importantly, a research skill to explore new knowledge and design resources. Recognizing the important function of the design studio in shaping designer’s professional perspective, the study intended to examine the pedagogical process of a design studio that aims at facilitating students to integrate their research results of sustainable strategies with design solutions. The outcomes can serve to assess pedagogical effectiveness and student research activities and to provide guidance for future teaching adaptation.

PROCESS

The design assignment was inspired by the disastrous aftermath caused by hurricane Katrina in 2005. Learning of the incident and its consequential impact on the people, cultural heritage and environment of the region, students were assigned to create a prototype of a sustainable shelter to house refugees in the case of natural disaster. It is to be designed in compliance with the following criteria: transportability, sustainability, and accessibility.

The project submission includes: (1) a set of drawings to demonstrate the fulfillment of the design criteria; (2) a set of specifications to include sustainable strategies, equipments, building materials, FF&E, lighting fixtures, appliances, etc. for the project solution, and (3) a reflective article to elaborate on the relationship between environment and the design professional, and individual's learning experience of integrating research findings with design solution.

SUMMARY

Students successfully identified the width limit of 14 feet for the highway transportation. Statistics data were established based on their specifications, which indicate the adoption of a wide spectrum of sustainable strategies and familiarity to professional organizations involving in environmental sustainability, water consumption, and energy efficiency, such as USGBC, ASHRAE, Standard 90.1-2007, Green Seal, CRI, Greenguard, Energy Star, FSC, etc. Some projects showed incompliance with ADA requirements, especially the bath room layout.

Yielding qualitative evidence of the learning experience in the studio, the reflective articles demonstrated a heightened concern for the environmental issues and an increasing interest in sustainable design, renewable energy, and green materials for interior design application. It also indicates a necessity to cover the topics of commissioning, life cycle analysis, and post-occupancy evaluation.



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(MN) 'Design Thinking is in the (full scale) details': Kinesthetic creation as a means to sustainability
Catherine Dowling, Ryerson University

'Design Thinking is in the (full scale) details': Kinesthetic creation as a means to sustainability.
*'the brain speaks to the hand as surely as the hand speaks to the brain'*¹

Following four years of an evolving curriculum and teaching methodology for a second year Interior Design Technology course, it has become evident that students' thinking and learning has been significantly heightened through kinesthetic creation while addressing global sustainability concerns and closed loop construction systems. The purpose of this presentation is to visually recount the advantages of interior design students hand building full scale construction mockups based on their proposed design solutions in a course where the primary focus is on materials and methods.

Student research is assembled from individual and team assignments integrating course knowledge, material properties, detailing, workshop experimentation and issues of sustainability. Working within a limited time frame students record and document the inherent qualities of specific design materials enabling an understanding of material lifecycle from 'harvest', manufacturing, application, potential reuse, recycling through to disposal. 'If human need is the place to start, then design thinking rapidly moves on to learning by making...instead of thinking what to build, building in order to think...'²

The final term assignment of the course is called 'Threshold' and is comprised of two parts. The assignment examines issues of enclosure, interface, and membrane through spatial, material and detail analysis. It also invites design thinking, exposure to issues of sustainability and kinesthetic creation through hand building. Part A challenges individual students to prepare a schematic design for an imagined 'space between' two existing interior volumes. The method of fabrication, assembly, installation, final disposal are integral to the process. A corrugated cardboard scale model, 3D drawing and set of hand sketched working drawings is combined with research focused on the ecological impact of a selected range of building materials, forming an understanding of production, manufacturing, installation, LEED material credits, maintenance, lifecycle and carbon footprint for the proposed threshold.

Threshold, Part B is a collaborative assignment requiring each team to select and modify an individual design solution completed by a team member during Part A. The team then reviews and revises the original design. Design and discovery continue through the teams' fabrication process of full scale prototypes in the school's 3D materials



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lab followed by an installation, erected as a temporary exhibition throughout public spaces in the school and on campus. A final research book documents revised design sketches, a refined set of working drawings, the full scale construction process and detail model(s), exhibit installation, disassembly and disposal summary of all materials.

This closed loop assignment exposes students to the issues of sustainability and interior detailing through tactile learning. The action of hand building full scale enables an immediate connection and understanding to material qualities and interior design space. The Threshold assignment continues to evolve. This past year, the threshold location was aligned to the second year Interior Design Studio and was required to be located adjacent to the retail facility researched by the student in their case study assignment. Full-scale construction mock-ups were also retained for use by the incoming Design Technology class to examine, prepare detailed sketch drawings and to disassemble, providing a reverse kinesthetic creation in the form of demolition.

'The desire to learn is reshaped continuously as we fashion our own personal laboratory for making things.'³

¹ Davies, R., *What's Bred in the Bone*, New York, Penguin Books, 1986

² Brown, T., TED talks, July 2009, http://www.ted.com/talks/tim_brown_urges_designers_to_think_big.html

³ Wilson, F., *The Hand*, Toronto, Random House of Canada, 1998, p.295

2:15 – 3:15 Presentations

(WKU) The Changing Role of Interior Design in Shaping Community Connections
Hillary Fulton, Purdue University

The Changing Role of Interior Design in Shaping Community Connections

This paper discusses the changing definition of “community” in our modern world and how this change directly affects the role interior designers have in creating spaces that support the societal need for a stronger sense of community.

The author first illustrates a commonly recognized definition for a sense of community. This idea is typically portrayed as an idyllic small-town setting (Duany and Plater-Zyberk, 1992) with friendly neighbors, near-by amenities, and pastoral views (St. Antoine, 2007), which ultimately limits the essence of “community” to only physical characteristics of a neighborhood. This nostalgic concept has acted as a model for the suburban and New Urbanism design movements in an effort to recreate the historic settings (Barthel, 1990), yet it unintentionally ends up segregating populations (Minerd, 2000; Ross, 2004; Scully, 2000) and limiting aesthetic character (Craig, 1986; MacCash, 2005; Matheson, 1997). These neighborhoods do not always achieve what the urban designers intend (Langdon, 1988), but building trends do not change and a sense of community is no closer to being reestablished.

The author theorizes that a rapidly developing dependency on personally isolating technology and a diminishing reliance on immediate surroundings for basic survival have altered the scope of what “community” can mean to a modern individual. As we now spend the majority of our time indoors (Leech *et al.*, 1996), interior designers have more opportunity than ever to impact the public through spaces that support technology-driven lifestyles while updating public perception of where to find their “community.” The interior design practices of universal design and sustainability can broaden the sense of community to cover physical *and* psychological connections within the human and environmental communities that span the globe. Universal usability ensures everyone has the opportunity to make connections by being physically present. Environmentally-conscientious products sustain a



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connection to our environment for the future. In addition, these two design practices can also provide access to “community” at the micro-and macro-level s; an example of this would be specifying modular workstations that double as accessible teleconferencing centers, thus eliminating excessively specific use and users.

The paper concludes that interior designers are now key figures in creating and maintaining a modern sense of community not limited to past trends and outdoor settings. Through effective design incorporating universality and sustainability, interior spaces can support the relationship between people, their peers, and their technologies at the individual and worldwide levels, effectively creating diverse and holistic “communities” for everyone

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(WKU) Rethinking Interiors' Curriculum : An Integrated Approach to Design Education
Kimberly Burke, Elizabeth Bartley, College of Mount St. Joseph

Rethinking Interiors' Curriculum: An Integrated Approach to Design Education

Introduction

In 2008, the College of Mount St Joseph decided to undertake a comprehensive review and revision of the Interior Design program. As of May 2010, a new program, Interior Architecture & Design + Marketing (IAD+M), was formally approved to be offered beginning 2011. The IAD+M is a four year program of study which intersects a liberal arts based investigation of Architecture and Interior Design with the goal-oriented and communication directed practices of business and marketing. Located in the new Department of Interior Architecture and Design (IAD), this fully integrated program opens up competitive professional opportunities for designers to respond to the dynamic needs of the 21st century global business world.

Background

This review and revision was a result of multiple, overlapping pressures: 1) The discipline of Interior Design has been internally searching for the past few years to define its role, mission and relevancy 2) local competition from top-tier programs including Miami and UC's DAAP as well as highly visible vocational programs 3) finally, industry needs and practices have moved and responded to rapid market shifts and new definitions and roles have arisen for 'design thinkers', 'design managers', 'design strategists', and the ubiquitous 'designer', irrespective of disciplinary specializations. As a consequence, new approaches to design education are necessary to create the next generation of design leaders.

Approach/methodology

We began with research, trend analysis and data collection, including the top undergraduate and graduate design programs, professional agencies and studios, successful practitioners, and the needs of industries and corporate partners who hire the designers. Our research repeatedly indicated one of the biggest gaps in design education is in the preparation of student to operate within the corporate world – not as individuals performing specific tasks within a design studio, but as collaborators who understand and engage with the needs and practices of the corporate world. Although discussions about integrating 'design thinking' with business, and business strategies with 'design', are becoming commonplace, systemic implementation of programs and studios at the undergraduate level are not. Our approach was to develop a program which integrates necessary domain knowledge, creative problem solving, and strategic and analytical thinking in a constructivist learning environment.

Solution

By thinking of 'design' not as an act of production but 'design' as a strategic business practice, we distilled our learning goals into the fundamental categories of design process, strategic design thinking and professional behavior. As a result, we were able to shift the program from a focus on technique, type and product to the core skills critical for future success, while leaving necessary flexibility and adaptability.

The three main components of the new curriculum can be summarized as the following: 1) 'inverted' structure emphasizing creativity, process, and communication in the first two years; 2) multidisciplinary platform: multiple design disciplines plus the liberal arts; and 3) integration with Marketing. This paper will share the details of the IAD+M curriculum, some of the educational theory behind the choices, and preliminary outcomes from the in-studio testing of this approach.



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3:30 – 4:30 Presentations

(WKU) Examining a Real World Consumer Emotional Response Model in Second Life
Kristina Coffman, Connie Dyar, Tricia Johnson, Illinois State University

Examining a Real World Consumer Emotional Response Model in Second Life

In today's technological world it is imperative that we look to the ever-growing domain of virtual reality for clues that could improve the way we design and teach in the interior design discipline. This study utilizes the concepts and findings from the 1982 study by Donovan and Rossiter titled Store Atmosphere: An Environmental Psychology Approach, but in the virtual reality environment of Second Life. By testing the Mehrabian-Russel Theoretical Model in virtual reality, utilizing Donovan and Rossiter's format, we hope to assess a popular theoretical model's applicability to the relatively new virtual environment of Second Life. The Mehrabian-Russel Model has been shown to be a valid measure of an individual's emotional reaction to the real-world retail environment.

Researchers have conducted a pilot study prior to the inferential analyses where the Cronbach's Alpha test was run on the 8 approach-avoid variables. All participants were Second Life residents browsing in various Second Life retail virtual store locations. The reliability value of these variables was found to be high at .94.

Researchers will also formulate results using a correlation analysis to determine if the pleasure dimensions can potentially predict the approach and avoid responses and if the arousal and general information rate dimensions can predict the approach and avoid responses from virtual residents. Regression analysis will also be done for the dependent measures on the PA dimensions with the addition of information-rate measures.

If established real world models are shown to have the potential to be applicable in virtual reality this will give interior designers a head start in designing for this new and minimally studied population. Also, if an individual's emotional reaction to the virtual environment is similar to the previous findings from the real world, interior designers could be taught to use this information to justify utilizing programs such as Second Life to build virtual mock-ups of retail spaces to demonstrate the effectiveness of the space prior to being built. Several designers are already utilizing this technology in the design process for their clients. Building a mock-up in virtual reality has the potential to be more cost effective and more sustainable than building physical mock-ups for clients, or a more effective method than utilizing current rendering technology where a user is only able to look at a set image, or movie reel of the potential space. Findings from this exploratory study will be presented as a means to begin bridging the gap between interior design for the real world with that of the virtual world.

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(MN) Re-Forming Terra Ludica: Creative Collaboration Using Social Media
Daniela Ghertovici, Steve Fuchs, Harrington College of Design

Re-Forming Terra Ludica: Creative Collaboration Using Social Media

We propose a new approach to interior design education supported by social media and new media processes. As design educators, we must address social media as being a critical paradigm shift in communication. The world now thrives on unprecedented super-connectivity and data convergence on a scale that demands radical innovation in quantification and synthesis of information. Ultimately, creative collaboration using social media throws into question traditional delivery platforms and design fundamentals including authorship, studio environment, and design education. Digital media seamlessly networks cultural theory, production, and communication--provoking us to ask, "*How are we participating in the reformation of interior design education?*"

Neurobiologist Jean Pierre Changeux discusses his model of the human brain as "a synthesis of multiple nested evolutionary processes". Changeux's model approximates the underpinnings of our proposal; the current "knowledge economy" does not demand a revolution in design education, but an evolution, or overlay of new knowledge layers, which in some cases challenge previous modes of knowledge acquisition, while sampling from other approaches to design education. The model that we propose is based on two key areas of evolutionary design, both emerging from social media and new media developments: *play and sampling*.

Play is a pivotal activity of the creative process, and we believe play during design education leads to unpredictable advances in researching, practicing, and educating. The adoption of social media ushers in an era that has evolved beyond The Information Age and into The Ludic Era. Defined by a participatory model, ludic design operates through collective research, invention, and fabrication, exposing vast uncharted territories of possibility for design, in both academia and practice. Our investigations incorporate new media, parametric, and generative techniques, in the context of rigorously defined rule-based design experiments, to enable a complex design organism that broadly examines *industrial versus organic* educational models. An organic approach towards design education assumes that we evolve and adapt over time, responding to radical fluctuations in human activity and directly critiquing traditional static design education, design processes, fabrication, and outcomes.

Sampling, a new media production technique that critiques traditional composition and orchestration processes, relies on existing collections (databases) of multiple music types, musicians, and music eras as a "territory" to be charted anew: ludic designers, like hip-hop artists, "sample" this database for fragments of design culture that are then recycled into their work. Through the use of social and new media technology, designers create fragmentary palettes--"colors" that can be remixed into new scenarios.

This mode of fabrication greatly relies on the "user as participant" model of mass reception. As Walter Benjamin predicted in his article "The Work of Art in the Age of Mechanical Reproduction", the process of engaging the "masses" in a collective culture necessarily activates a "collective unconscious" in which vast numbers of individuals who are exposed to mass media have shared experiences and memories, irrespective of demographic or geographical distances.

Emphasis on play theory and sampling culture chart new territories for interior designeducation, especially as they relate to creative collaboration.



CONFERENCE PRESENTATION SCHEDULE

Saturday, October 16

8:30 – 10:15 Presentations

(MN) Small, yet significant: Exploring the role and use of memory boxes in dementia care centers
Gowri Betrabet Gulwadi, University of Northern Iowa

Small yet significant: exploring the use of memory boxes in dementia care centers

Shared residential environments for older adults strive to establish a non-institutional character, increase privacy, preserve dignity, and enhance independent functioning. Therapeutic design principles (e.g., Brawley, 1997; Calkins, 1988; Cohen & Weisman, 1991) have now impacted most areas of the physical environment (e.g., common spaces, the resident rooms themselves, hallways) and continue to evolve. However, one small environmental feature has not yet been studied further in terms of its effectiveness, i.e., the memory box or display box that is often found at the entrances to resident rooms. Dementia is a degenerative condition that impacts a person's cognitive ability to meet environmental demands, especially in activities related to memory. This exploratory study adds to the 'design-for-dementia' literature by documenting design features of hallway memory boxes in assisted living facilities.

A memory box is a display unit often recessed in a wall, and may have some or all of the following features: adjustable shelves, lockable glass door, interior lighting. The location is usually outside the resident room, next to a name or room number sign. It is designed to hold personal memorabilia, and can act in multiple ways, e.g., to establish one's identity, serve as a cue for orientation and finding one's way to a room within the facility, and/or as a tool for reminiscence. A memory box takes on a high significance in dementia care centers because it is an environmental feature that addresses key therapeutic goals in dementia care – maximizing awareness and orientation, and establishing links to the healthy and familiar (Cohen & Weisman, 1991).

There is very little research on this topic – one study has looked at the potential of memory display boxes in enabling orientation and wayfinding (Namazi, Rosner, and Rechlin, 1991), another has examined the importance of entryways in assisted living centers (Proffitt & Briller, 2002), and a third has examined the potential of portraits and personal memorabilia as cues for finding one's way in the facility (Nolan, Matthews, Truesdell & VanDorp, 2000). Although there are different configurations and sizes currently in use at different facilities, key design aspects of memory boxes that might impact their usefulness have not yet been explored.

This research study documents the design characteristics and use of three types of memory boxes in three dementia care facilities and assesses what works and what does not with respect to key therapeutic goals. A content analysis of photographs of memory boxes in each facility was conducted using inductive qualitative techniques to compile categories of commonly displayed items. Semi-structured interviews with key staff members were used to compile ways in which the memory boxes played a role in each facility for the different users. The findings present relevant design features of memory boxes identified through the study. The resulting discussion uses therapeutic goals to outline design features that can be considered for future focused studies.



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(MN) A History of Aesthetics and the Valuation of Space
Justin Wilwerding, Brown College

A History of Aesthetics and the Valuation of Space

Taken in its most primitive form space is boundless, featureless and endless, this is true quite simply by virtue of the fact that "space" is an abstract concept that is a function of human culture. The development of the notion of space and its aesthetic valuation is grounded in a range of cultural concerns; space has been variously defined as political currency, as an indication of wealth and position, (Markus, 1993) as a medium of communication and aesthetic composition, as a pedagogical system, and even as a sacramental artifact. (Eliade, 1987) Space as a medium is unique in that it is often seen as a message without an author: borders, the urban fabric, neighborhoods, and others systems of spatial definition at the macro level have been thoughtfully considered for centuries, but the semiotic power of interior space is one of the least critically analyzed components of human culture. (Hardwick, 1977) (Sechehaye, 1974) Only since the advent of archeology in the eighteenth century did the notion of material culture and space, come to be considered as an important carrier of human meaning and a significant arbiter of human culture. This presentation will examine the history of notions of space beginning with the Metaphysics of Aristotle (Zalta, 2009) and concluding with modern questions of the significance of space as examined in sociology, anthropology, (Turner, 2001) archeology and cultural geography. (Tuan, 1990)

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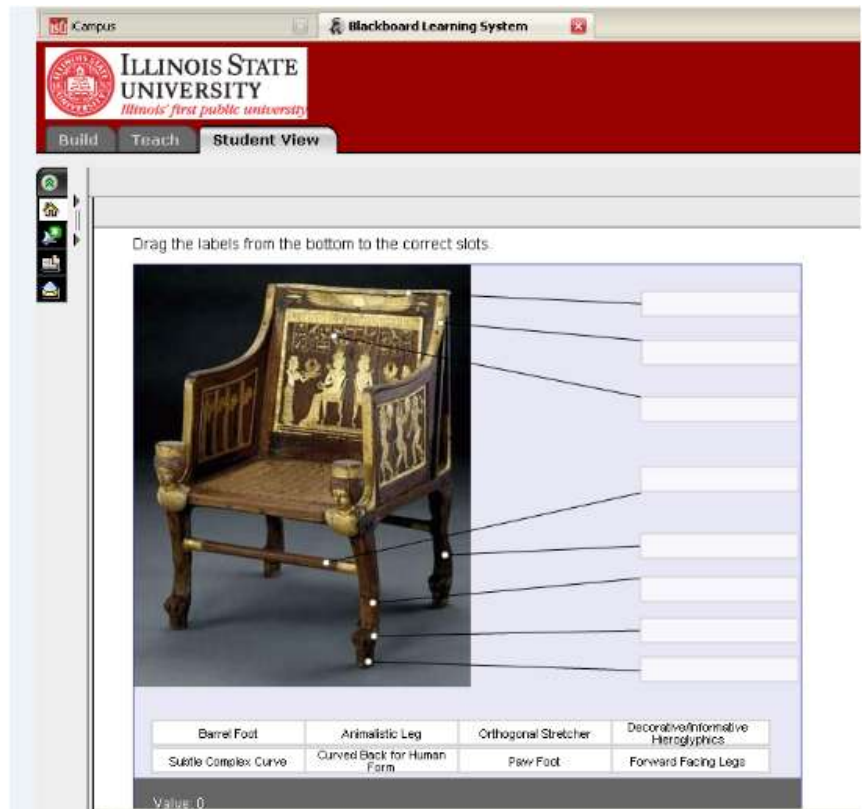
(MN) Online Interactive Exercises in Interior Design History Education: Effective Assistants?
William Riehm, Illinois State University

Online Interactive Exercises in Interior Design History Education: Effective Assistants?

This teaching forum presentation presents a set of interactive exercises and reviews the exercises' effectiveness in achieving learning outcomes for courses in the history of interior design. The exercises are online matching activities where students are asked to relate design vocabulary to images of designed spaces and objects. The intended learning outcome is that students have an ability to describe designed space and objects with appropriate vocabulary.

This forum reviews a History of Interior Design I (through 1800) course conducted in the spring of 2010. The text used for the course was Mark Hinchman's *History of Furniture: A Global View*. The online course platform was the Blackboard Learning System CE6/8. The software used to create the exercises was Soft Chalk LessonBuilder 4. Students had online access to interactive exercises and brief additional readings to support their learning in slide-based lectures, and assigned text readings. Relevant vocabulary was included in the interactive exercises and highlighted in the additional readings. Data collected include the use of this vocabulary in exam questions responses. The frequency of the use of relevant vocabulary in lecture and in the assigned text was also collected. Historical topics that were the focus of this study include gothic and rococo design.

Relevant recent scholarship on this topic include a 2009 teaching forum presentation at the IDEC South Regional Conference, "Four Assignments for History of Architectural Interiors Courses," by Jessica Goldsmith, and a 2005 article, "Cognitive Load and Learning Effects of Having Students Organize Pictures and Words in Multimedia Environments: The Role of Student Interactivity and Feedback for Educational Technology Research and Development," by Roxana Moreno and Alfred Valdez in *Educational Technology Research and Development*. Goldsmith discusses the use of online discussion boards and graphic projects as being preferred by only one third of students over traditional classroom experiences. Moreno and Valdez conclude that interactive exercises did not facilitate the achievement of learning objectives at a greater rate than traditional lectures. But in these two studies, the use of online interactive technology was an alternate to a traditional lecture system. In this presentation, the online interactive element is reviewed as an assistant to traditional course formats.





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Preliminary analysis of the data collected suggests positive influences on learning outcomes from online interactive exercises. A thorough analysis will be completed for this presentation in October. This presentation will conclude with suggested avenues for more sophisticated analysis and potentials for enhancing online interactive tools.

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10:30 – 11:30 Presentation

(WKU) Inclusive Pedagogy Amidst Evolving Perspectives and Boundaries

Thelma Lazo-Flores, Ball State University

Inclusive Pedagogy amidst Evolving Perspectives and Boundaries

Keywords: inclusive pedagogy, inclusivist approach, Kolb experiential learning theory, da Vincian principles

Introduction:

Our academic roles are constantly defined by multiple facets of perceptions, actions and appreciations stemming from the plethora of pendulum swings that also resulted from budgetary cuts, declining enrollment, accreditation standards, quality assurance and assessment procedures, administrative changes and faculty movement, shifting facilities, industry expectations, and expanding institutional competitions.

Even with such diverse trajectories, evolving perspectives and shifting boundaries, all design faculty need to pursue an inclusive pedagogy and create a utopian learning environment. The body of knowledge surrounding creativity and critical thinking within several branches of design has indicated many converging and diverging viewpoints. Convergent as in major issues like sustainability, health and wellness, quality of life, social justice and diversity; while divergent in terms of the multiplicity of design attributes, interpretations, processes, validity and limitations in human exploration.

The paper seeks to illustrate that convergent and divergent factors in learning exist in numerous models such as inclusive pedagogy, the inclusivist approach, the Kolb experiential learning theory and as far as the seven Da Vincian principles. Refer to Figures 1 and 2.

Objectives:

The research paper illustrates that our pedagogy evolves in cycles and patterns, with multiple invariants existing in contemporary and past models. The study focuses on models such as the Kolb experiential learning theory, inclusive pedagogy, inclusivist approach which have been established as useful in facilitating design courses, and the old tenets of inquiry as shown in the seven Da Vincian principles namely: *curiosita, dimostrazione, sensazione, sfumato, arte/scienza, corporalita and connessione*.

In this research paper, the attempt is to review the above-cited pedagogical models with reference to some underlying objectives such as:

- to examine the present challenges in design education with reference to an accreditation review,
- to evaluate the prevalent modes of teaching and learning experiences in the design classroom,
- to share various accounts of creativity and critical thinking as evidenced by student works,
- to examine the good practices that present cutting-edge and innovative solutions,
- and to provide evidences of effective practice-based research and processes.

Methodology:

This contextual study covers the analysis and synthesis of several layers: the review of published literature and articles relative to the diverse challenges in design education; the examination of materials covering the four pedagogies that support creativity and critical thinking; the comparative review of the three contemporary models with the framework on Da Vincian principles; and the visual survey of course designs and their project outcomes that strongly manifest evidences of pedagogical validity.



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Discussion and Results:

Design education has continued to adapt, evolve, define its role in the 21st century, and respond to larger contexts of transformation and the broader compass of human ecology. These diverse challenges that humanity face everyday encompassing all facets of cultural, socio-political, technological, and economic developments has also permeated our approach to creative practice.

The compendium of literature and visual works reviewed for this research have shown that many learning styles and structures heavily used in other disciplines reveal parallel taxonomies significant to design education. Within the examination of structured pedagogies, complexities that surround design teaching and learning can be re-framed with multiple approaches, thereby eliciting diverse modes of student thinking, producing a synergetic design engagement, and creating a higher level of learning. The tasks of discovering new concepts and shaping new contexts can be paradoxically illustrated within the inclusive pedagogy, inclusivist approaches and the Kolb experiential learning theory, as well as in past postulates like the seven Da Vincian principles. All four models can co-exist in layers and can be useful for studio, lecture, on-line and hybrid types of instruction.

The author has shown in other teaching and learning - focused researches the validity of these models on multiple case studies in design, and can be adapted and integrated as we pursue all facets of pedagogical inquiries.

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(MN) The Role of a Philosophy of Science for Interior Design
Justin Wilwerding, Brown College

The Role of a Philosophy of Science for Interior Design; Epistemology, Axiology, Logic and Ethics

The role of a philosophy of science is to synthesize an approach to knowledge within a discipline that is based not in the aim to achieve a particular outcome, but rather to make it possible to see the relationships within a discipline holistically and thus establish structures, roles and guidelines providing a foundation for the development of that discipline. (Rosenberg, 2008) (Lonergan, 1972) A Philosophy of Science addresses the traditional aspects of knowledge which identify and provide a basis for an integrated body of knowledge: (Friedman, 2003) in *metaphysics*, normative approaches to inquiry; in the form of the study of patterns of reasoning through *logic*; regarding the criteria for sufficiency of knowledge in the study of *epistemology*; via an examination of the purpose and value of the contributions of the discipline to the larger culture through the pursuit of *axiology*; and the study of the manner in which the discipline serves the welfare of the culture in *ethics*. This presentation will engage discussions of the elements of and potential structure for a philosophy of science for Interior Design and will propose an outline for a clearer paradigm for the future development of the discipline, examining the roles of epistemology, axiology, logic and ethics significant to the discipline. (Zalta, 2009)

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