IDEC 2005

DELIBERATE DESIGN

A Humane and Enlightened Course of Action

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2005 IDEC Conference Abstracts

Conference Chair: Tray Crow, Savannah College of Art and Design

Abstracts Review: Nann Miller and Marie Gentry

Abstracts Editor: Kristen Moore

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SUBMISSION CATEGORIES

PAPER

A paper is formal in structure and format. The goal may be to present a question or issue that is structured as conceptual, analytical, empirical research, or applied research and is grounded in a systematic process. The question or issue may be descriptive and/or prescriptive in analysis and involve interior issues of theory, education, pedagogy, or practice related to the built environment. The author will present issues or topics derived from a critical question or speculative subject matter, such as theoretical models, with the intention of advancing a treatise, position, or state of the interior design discipline or practice. Papers may be finite and conclusive, providing descriptive and/or conditional findings to the audience. Or, the paper may be directed toward a public discourse that provides critique and feedback, to think reflectively and refine the work. Accepted enabling the author papers must post a "Billboard" for their session during the meeting. Details can be found in the last section of the Call for Abstracts.

PANEL

Panels are interactive and less formal in structure and format. The goal is to stimulate interaction on a relevant topic or issue of interior design pedagogy, practice, theory, history, and/or criticism. The author develops the background and framework to engage panel members and the audience in discussion and exchange, to stimulate creative thinking, and to garner additional insight and reflection by participants. Subjects that are innovative or creative or controversial in approach either as application or conceptual development of current issues or topics in interior-design education, pedagogy, professional practice, as well as theory, or criticism are appropriate as presentations.

POSTER

A poster strives to foster exchange between members through visual images, text, and/or diagrams. This format offers experiential interaction and directs audience/author engagement or allows independent viewing. The author(s) develops visual information that expresses ideas or tracks a process relevant to interior design teaching, pedagogy, method/process, theory, practice, history, or criticism. The audience comments, questions, or seeks dialogue about the content or interpretation of the topic with the author(s) to advance the idea or further apply the process.

TIME FRAMES

Papers are allotted a total of 45 minutes; allow 30 minutes for delivery and 15 minutes for questions and discussion. Panels may use the entire time. Posters will be presented simultaneously throughout one day, and authors must be present during the assigned Poster Session.

The Trailblazers, the Tastemakers, and the Placemakers,
a Critical Review of Interior Design 1945-1970

Nancy Blossom
Washington State University

Issue

In the United States, the notion of interior design has multiple interpretations. This paper examines the contributions of interior design practitioners as individuals and as a group. The study explores the convergence of forces such as, social, economic and political, that have shaped the profession from a unilateral definition of decoration to a multifaceted, human centric realm of function, space, behavior, and design.

Process/Context

Recent work in the development of a database of interior design professionals in the twentieth century brings a different perspective to the review of the contributions of interior design practitioners as individuals and as a whole. While there is no lack of information in popular literature on individuals who practiced in the field of interior design, an incredible disparity of information is evident. Although much of current scholarship focuses on the argument for consistent application of specialized knowledge in the field that benefits society through practice, it is difficult to claim the history of the interior design profession as distinct from that of architecture, furniture and other design disciplines. That the body-at-large continues to debate the identity of the profession may be because much of its history is not yet credited. Further, it is possible that by focusing on this specialization of knowledge in the effort to assign a discrete value to the profession, scholars are overlooking the richness of interior design's professional diversity as well as the contribution this diversity has made to American cultural history and society at large.

This paper delves into the influences that shape the perceptions of the interior design profession in the second half of the twentieth century through the construction of an interpretive historic discourse. The 20th century, with its widespread cultural fragmentation, saw the gradual separation of duties between architecture and interior design. Architects who continued to design interiors became the exception and not the rule and in most cases were proponents of the modernist pioneers. This vacuum offered opportunity for creative and progressive individuals. A new professional, the "interior decorator" was born. This new occupation was not without critics, the most vocal of whom were often architects. To demonstrate the pervasive criticism of the decorator one need only look to the writing of Ernest Hemingway in 1932 in *Death in the Afternoon* "prose is architecture, not interior decoration." This estrangement persisted through the Depression and war years, but the unprecedented post WWII construction boom that lasted through the 1960's most clearly defined the split between the two professions of architecture and interior design. Of equal interest is the gradual distance placed between the profession of interior decoration and interior design.

Summary

Looking closely at the diverse contributions of interior design practitioners in this period, this paper explains the basis behind the various interpretations of the profession and charts how these interpretations begin to merge, as the profession and academic discipline evolves toward the end of the century.

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Deliberate Design – Mere Cultural Activity or Enlightened Cultural Production.

Gillian Davies
Savannah College of Art and Design

Purpose /Issue

The purpose of this paper is to critically reflect on design as cultural activity versus design as cultural production. This theme presents many prospects for a reconsideration of design thinking and work production, which are especially true in relation to gender issues within the cultural changes of early modernity. The paper will address issues of agency, production and consumption in relation to gender and the presentation of early modernist ideologies.

Framework of Study.

The methodology of the paper is based upon an analysis of the design outcomes, publications and lifestyle of one women interior designer in the period from 1890-1950. The designer studied is Elsie de Wolfe who worked in America and France. Her work is worthy of study because it can provide a new definition of women's roles in relation to the development of modernity and early professional practice in Interior Design.

Design historians have documented the life and work of early interior designers and the development of the profession in factual overviews such as Pat Kirkham (2000) and Penny Sparke (2004). Interior design historians like John Turpin (2001) and Lucinda Havenhand (2003) have highlighted the need for a post-modern- deconstructive analysis of early texts in order to address a more real history rather than a dominant mainstream narrative which might have been perpetuated in order to empower certain groups in society.

De Wolfe's work and identity is studied in relation to how deliberate new design practice and outcomes may have enlightened views about gender changes within modernity. A theoretical approach to the development of modernity using feminist history is thus incorporated into a critique of women and their contributions to interior design as cultural production.

Methodology/Context.

Advice Literature

The paper uses a framework of assessing how such individual designers were perceived and presented to the public through comparing the ideals of advice literature in magazines like 'Good Housekeeping', or 'The Ladies Home Journal', from 1920-1935, with the designer's own publications such as *The House In Good Taste,* from 1913. A close reading will be used to determine whether there is a gender bias found in early writing and whether this compares with how the designer presented her own views.

Theoretical Concerns.

Through such considerations, the paper hopes to establish whether such designers' influence was significant during a critical period in interior design history and whether it should be studied as uniquely performative in its own right. The deliberate new spaces produced by

homosocial designers like Elsie de Wolfe may be perceived as conflicting with economic, psychological and social meaning in traditional, historically designed spaces but did her work constitute a new design practice?

Women designers' preoccupation with changing limited interior space to suit the individual needs of a new generation will be examined as exemplifying modernist philosophy and functionality. De Wolfe's craft enterprise in relation to the adaptation of traditional eighteenth century forms will be studied as being oppositional to the mass-production ideals of European modernity. Her gendered role in relation to marriage and homosociality will be examined as an agency for the development of professionalism in the field of interior design production.

Summary

Through focusing on the nature and context of her designs, social position and identity, the analysis will address the significance of gendered interpretations of modernism. The paper wishes to scrutinize how gendered attitudes to cultural activity and its production were created or perpetuated in relation to interior design work within the period of early professional practice.

Designing for a Secure Future: The Effects of Homeland Security on Interior Design Education and Practice

Rula Awwad-Rafferty
University of Idaho

Linda S. O'Shea
Kean University

Issue

Hostile assaults, crime, threat of terrorism, violence in public and domestic spaces—all underscored by the events of September 11, 2001—have heightened our awareness of the vulnerability of the built environment and became a major concern on many frontiers.

The federal government, along with many security companies and personnel, has attempted to address these urgent security concerns by establishing a dialogue on security issues, providing security guidelines and mandates, and offering an array of security related products. Yet, two issues become evident.

First, the federal government's response to this threat has adversely affected the urban landscape, especially in regards to public places and historic urban design and landscape. "Street closures have increased traffic congestion; disrupted local business activities; and marred the beauty and historic design of the nation's capital with hastily erected jersey barriers, concrete planters, and guard huts that surround our buildings and line our streets" (See Illustrations A & B attached). Second, the interior designer's involvement with allied design professionals in these initiated security dialogue appears categorically missing.

This presentation will outline the current approaches provided by architects, landscape architects, facility managers, technology experts, security personnel, and the federal government to address security issues in the designed environment, while highlighting the necessity of the interior design professional to become an integral part of security issues involved in the design of the built environment.

In addition, this presentation offers recommendations to fellow design educators as to how they might introduce the security dialogue into courses and/or design studios in an effort to educate students to the responsibility of the design community to provide good design that is not mutually exclusive of security measures. This presentation will also illustrate two actual student projects dealing with security concerns: 1) a site analysis/field study of a Bio-terrorism Laboratory, and 2) a conceptual design studio problem that addressed specific security issues, both providing working examples of how educators can introduce the security dialogue into the overall design process.

Process

The project researchers conducted personal interviews, reviewed contemporary textbooks and periodicals, reviewed literature, product catalogs and private and public agency's web-sites and/or published educational materials, to determine how those involved with the built environment, allied design professionals, as well as those in related fields, are integrating the

heightened anxiety, risks, and temporary security measures into their professions and design processes.

Summary

Security has become a paramount concern within the built environment due to the acts of violence occurring around the world. Issues of security have become a critical overlay in almost every major design project. It is important for design educators to enlighten future design professionals as to security issues and concerns, by understanding that if security is considered from the onset of a design problem, the outcome is a more sustainable and effective design solution, with a seamless connection between security and other functional, social, aesthetic, and economic considerations.

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Do Past Living Environments Influence on Older Adults' Environmental Perception in Congregate Living Environments?

Naz Kaya
University of Georgia

Jennifer Webb
Nancy G. Miller
University of Arkansas

Purpose

In Altman and Chemer's (1980) ecological theory, the authors discuss the interaction between people, their culture, and their environment. This model suggests previous environments influence perceptions of present environments. The study's first objective compares current living environment evaluations between assisted- and independent-living residents. The second objective examines older adults' perceptions about their present space in relation to length of time in residence, size of present residence, number of previous residences, distance from last residence to current facility, previous living unit type, previous residence size, and previous household size. The third objective was to examine perceived crowdedness in relation to the same variables related to the previous living environment.

Method

Participants resided in two assisted-living (n = 47) and one independent living (n = 24) facility in the southern US. The mean age was 85.45 ranging from 73 to 101 years. The sample consisted of 80.3% (*n* = 57) females and 19.7% (*n* = 14) males; this imbalance between genders is consistent with current demographic trends.

Structured interviews consisted of (1) demographic information, and (2) perceived crowding. Perceived crowding was assessed with a 19-item scale. Nine items were statements about the present living environment, such as "I feel that the living situation here is very crowded." Participants responded to each item on a 7-point scale (1 = strongly disagree; 7 = strongly agree). Ten items were semantic differential scales about the living environment (e.g., comfortable-uncomfortable, roomy-cramped), adapted from Kaplan (1982). The older study population and the study's context in assisted and independent living were accommodated. Each interview lasted between one and three hours.

Summary

This study explored the differences in older adults' evaluation of current living spaces as a function of previous residences. Differences between assisted- and independent-living residents reveal some interesting trends. Assisted living residents indicated their environments were colder, more public, and less pleasant than did independent-living residents. Independent-living residents rated their spaces as more personal, more open, and quieter than did assisted-living residents. This may be the result of control; independent-living residents can take more

personal items and exercise more control over their space. Independent-living residents had balconies or patios which may contribute to the perceived openness.

Regression findings are more difficult to evaluate. No significant findings were identified for independent-living residents. One reason may be the choice allowed those residents in apartment size, amenities and indoor/outdoor auxiliary spaces. The small sample size should also be considered.

For assisted-living residents, three predictors suggest some interesting ideas. Increasing distance from the previous residence to the facility resulted in negative evaluations. Upheaval in the individual's life and loss of informal support may be the cause (Atchley, 1988). Larger household size and number of bathrooms in previous dwelling also resulted in negative evaluations of size (cramped, crowded) suggesting a carry-over effect.

Additional research should include an evaluation of previous residences similar to the current living environment. Reported amenities may not reflect the subjective nature of environmental evaluation.

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Developing a Collaborative Multidisciplinary Online Course

Diane M. Bender
Arizona State University

Purpose

Computers impact every stage of the interior design process, from ideation to construction. In turn, they influence traditional education and the newest form, distance or online education. Yet art and design often lag behind the schools of business, engineering, and science in curricular integration of digital technology (Abacus Associates, 2000), even though technology has demonstrated "a significant impact on the way art is taught, studied, and practiced" (Lawn, 1998, p. 56). Most of the research on distance education focuses on student outcomes, course and program design, and the effectiveness of the technology. Yet research addressing faculty concerns is sparse (Visser, 2000) and educators in interior design are reluctant to teach with distance education methodologies (Bender & Good, 2003). How can interior design educators embrace this new educational media? This paper addresses the changing role of the interior design educator in a collaborative online environment and how a multidisciplinary course offered between five major universities was a catalyst for change.

Process/Context

To maintain a competitive advantage and to prepare students to communicate electronically in the professional global community, online courses in design are being developed at several universities (Blossom, Matthews, & Gibson, 2002). An interdisciplinary collaborative course entitled "Issues of the Built Environment" was recently offered to a multiple university audience. Using the latest Internet2 technology, students were taught by faculty in Interior Design, Architecture, Building Construction, Landscape Architecture, and Urban Planning. Faculty represented five different universities in various regions of the United States. In addition, local and international practitioners participated "virtually" as guest critics and lecturers. The course took advantage of faculty with complementary skills to provide a unique learning experience to a larger group of diverse students.

Students and faculty met weekly for 12 weeks to discuss issues through onsite videoconferencing and online discussions. Students in this course learned how the various disciplines from the built environment interrelate in terms of their professional responsibilities, values, tools, theories, and processes. Discussions included ethical, social, and legal topics for both timeliness and controversy. By purposely including controversial topics, multiple perspectives were shared and students became more actively engaged in debate. Students and faculty gained an awareness of the various design disciplines and how they are interrelated, in addition to seeing how computer and Internet technologies can better facilitate communication. Participating faculty gained knowledge and experience with advanced online technology and learned how to collaboratively develop and teach an online course.

Summary

Implications from this study suggest future collaboration between multiple disciplines and multiple universities should be pursued. A course such as this encourages students to integrate their interior design philosophies with students from other design-related majors. In addition, this form of online collaboration can be motivating to educators who wish to pursue a new challenge in the teaching arena. This presentation will directly address the challenges involved in developing and teaching this kind of course and how interior design educators can be on the cutting-edge of innovative multidisciplinary teaching initiatives.

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Enlightened Voices: Strategic Stories of Growing a Socially Responsible Business

Sheila Danko
Cornell University

Purpose

This study explores the intersection of socially responsible business and design. In particular, the research examines how leaders of new business ventures who endeavor to be more socially responsible, use design as a tool to communicate their vision and values and to position themselves strategically in the marketplace. The presentation outlines the inherent creative tensions and special challenges unique to socially responsible business and highlights the role of design as a tool for leadership and social change.

There is a new breed of business leaders emerging who are attempting to harness the power of traditional market forces to do social good. They are referred to by many titles including activist entrepreneurs, social entrepreneurs, moral entrepreneurs, social capitalists and socially responsive business leaders (Shore, 2004, 2001; Singer, 2001). Corporate ethics, social responsibility, and values-driven organizations are receiving increasing attention in not only the popular press but academic press as well (Carroll & Buchholtz, 2003; Overholt, Dahale, & Canabou, 2004) challenging higher education to engage in the dialogue of new ways to bring about social change. Designers must be a part of this dialogue, actively exploring their evolving role in supporting socially responsible business. As businesses change, so must the practice of design to meet their needs.

Methodology

The research design utilizes a systematic, multiple case-study format in combination with narrative inquiry to compare and contrast the various ways socially responsive leaders use design and design process to communicate their vision, values, and social mission to both internal and external stakeholders. Interviews were recorded and transcribed and subsequently analyzed for cross cutting themes pertaining to the role of design in support of socially responsive business initiatives. Stories were then constructed from the personal narratives using Labov's (1982) six point framework.

Findings

Strategic stories from several different cases will be presented. All the stories illustrate not only the power of design to connect individuals to the mission, vision and values of the organization, but detail how individuals were personally impacted by the design either through symbolism, process and procedures, or strategic planning. Story issues include how a VP used symbols in her personal office space to establish a stronger connection to the user group she supported. Another story documents the tension of designing for a corporate culture that was in conflict with the regional, societal culture and reveals the corporate values centered around issues of diversity. A different story examines one leaders understanding of design as a strategic process tool, applying a nontraditional approach to organizational design. What all the leader's

stories have in common is a shared understanding of whole systems designing – the need to approach change as a product of interrelationships tempered by human motivation.

Summary

This study utilizes storytelling with a multi-vocal perspective to communicate the complex, multi-faceted role of design in supporting socially responsible business. The study responds to a growing call in higher education for teaching values consciousness in students as well as the need to explore the evolving role of design in society. The findings emphasize the need to train designers to think from a whole systems perspective when approaching issues of organizational change.

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Deliberate Design for Safe, Healthy Environments

Linda L. Nussbaumer, Ph.D.
South Dakota State University

Issue

Many individuals have become ill from chemicals emitted from materials within interior spaces. Many materials used in building construction, interior finishes and furnishings, and products for installations contain chemicals that may trigger multiple chemical sensitivity (MCS). MCS is a condition in which an individual reports sensitivity to various chemicals and other irritants at low concentration levels (EPA, 2003).

Research on MCS revealed a controversy within the medical community. This has stymied the medical community and affected the legal community. For the design community, there is little controversy; however, some designers specify safe, healthy products and materials, while others do not. This may be due to the lack of education on the condition (Haberle, n/d).

Since interior designers specify materials for the built environment, it is essential for designers to become knowledgeable on MCS as it relates to indoor air quality (IAQ) and deliberately design safe, healthy environments. For this to happen, all designers need to take deliberate action through education, research, and outreach.

Context

Within the medical community, MCS has been controversial for over 60 years. Many physicians will not treat patients with MCS because they consider it a psychological illness (Kerns, 2001; Magill & Surda, 1998; Winterbauer, 1997) or because of the lack of research on the condition (Gist, 1999; Winterbauer, 1997). And yet, there are physicians and clinical ecologists who recognize MCS as an illness and will treat patients with MCS (Barrett & Gots, 1998; Kutsogiannis & Davidoff, 2001; Winterbauer, 1997). As a whole, it is the lack of research that has stymied progress; thus, more research is needed for the medical community to come to a consensus on MCS.

Within the design community, designing safe healthy interiors is not questionable. In fact, designing safe, healthy environments is part of the professional code of ethics (ASID, 2003); this means that interior designers need to design spaces for people with MCS. However, not all interior designers specify materials with individuals with MCS in mind.

The relevance of MCS for the design community relates to materials that contain chemicals, which may trigger MCS. Furnishings (e.g., carpet, synthetic textiles) chosen for interior environments may contain volatile organic compounds (VOC) that off-gas into the interior. VOCs greatly affect indoor air quality (IAQ), and IAQ is the key factor that affects people with MCS (AIA, 1997; Anderson, 1997; Williams, 1997). Thus, it is important for interiors designers to know the causes and symptoms of MCS to avoid triggers and decrease user exposure to toxic chemicals.

Summary

Interior designers should take deliberate action by becoming educated about good IAQ; by designing spaces and specifying materials that are safe for people with MCS; by becoming involved in research to further promote good IAQ; and/or by becoming legislative advocates for people with MCS.

During the presentation, discussion groups will be formed to look at examples used and brainstorm ideas in the areas of best practices for education, good examples within communities for observation, research possibilities, and outreach methods.

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Effects of Design Participation on Habitat for Humanity Homeowners' Satisfaction

Yun Zhu, Ph.D. Candidate
Mary Joyce Hasell, D.Arch.
University of Florida – Gainesville

Purpose

A number of qualitative studies (Finn, 1994; Mitchell & Warren, 1998; Arizmendi, 2003) reported that design participation empowered Habitat for Humanity (HFH) homeowners. They also asserted that participation contributed to increased satisfaction with their house and neighborhood. However, these researchers lacked sufficient evidence to quantify the impact of participation on homeowner satisfaction. In an effort to go beyond qualitative measures, this study explored whether or not design participation by HFH homeowners was associated with housing and neighborhood satisfaction.

Established in 1965, HFH helps low- and very low-income families to build their homes. Through self-help or sweat equity effort homeowners take control of and participate in the building processes. HFH sweat equity is measured by the number of hours a family works on others' houses as well as their own. Sweat equity for their own houses includes attending training courses, working on the construction sites and with Habitat staff to choose the site, colors and finishes for their houses. Currently, the design-related sweat equity hours are a small fragment of the total required 300-400 hours.

According to Friedman and Lackey's (1991) *Prediction Theory*, both increasing and exercising control are the ultimate and persistent motivations for human behavior. Therefore, self-help is not only a process to achieve the visible results of an affordable house, but also a means to empower low-income residents by increasing their control of the building process.

Methodology

A case study was conducted in three HFH neighborhoods located in two cities in the Southeastern region of the United States. Convenience sampling and volunteerism produced 28 respondents who received a mail package that included a self-administered survey. After two weeks, the researcher contacted the homeowners by phone and set up the interview time for willing respondents. During the personal interview, open-ended questions related to the meaning of their own design participation were explored. The independent variable was design participation. Respondents (Rs) reported the number of design-related activities they accomplished, i.e., site selection, exterior and interior design. Rs reported their thoughts and feelings about the experience of selecting interior colors and finishes for their houses. Rs were also asked to comment on their desire to increase the amount of participation in the design of the interior and exterior of their house. The dependent variables were design satisfaction and overall satisfaction of the house and neighborhood.

Summary of Results

This exploratory study found that the more design activities homeowners participated in the greater the satisfaction with their homes and neighborhood. The data supported the

prediction theory that participation increases control and satisfaction. Based on the findings, these researchers urge HFH affiliates to consider increasing the number of sweat equity hours devoted to participation in design decisions. Currently, the amount of time spent on design participation by low-income Habitat homeowners is only a fraction of their total sweat equity hours, so even a small increase in the time spent on personalizing their homes could result in a significant sense of control and satisfaction.

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Contextual Analysis In Interior Design

Barbara G. Anderson
Michael T. Dudek
Peggy L. Honey
Kansas State University

Roberto J. Rengel
University of Wisconsin - Madison

Issue

The issue of contextually responsive interiors is important to the future of the interior design profession and should be addressed in both practice and education. Interior design cannot exist without an architectural context. Each architectural envelope is the primary "context" wherein interiors are created yet the topic of contextual analysis and response is included in only a few textbooks intended for use in interior design education. When contextualism is addressed in texts for interior design, the general focus is on the site, region, culture, or specific materials and their condition, rather than the spatial and formal context of the building envelope (i.e. Karlen, 2004; Pile, 2002; Rengel, 2003). Many opportunities are missed when interior designers are unaware of, or ignore, contextual issues such as view, daylight, approach & egress, noise, building modularity, and architectural design intent.

In contrast, historic preservationists, architects, and landscape architects have been addressing contextual design for decades. Would a different response to contextualism by interior designers help to validate the interior designer's role and increase their value to clients, architects, and other design professionals (Amelar, 1999; Russ & Dickinson, 1999; Moonan, 1998; Starr, 1996)?

Are interior designers concerned with contextualism in interiors? Does interior design need to respond to its context? If so, what processes could interior designers use to analyze and respond to context in meaningful ways?

Process/Context

A panel of four interior design faculty members will present their opinions of the need for a contextual response in interior design and recommend methods or approaches to contextualism that have been appropriate in their professional practice and teaching. In short, each panelist will provide a point of view on contextualism in interior design. These points of view will vary due to their diverse areas of practice experience, which include health care, corporate office, historic preservation, and residential design. Panelists will discuss how interior design can connect to the "spirit of the architecture" using formal and spatial analysis and by responding in a meaningful way to the architectural envelope. Among the questions the moderator may pose to the panelists are the following:

NCIDQ's definition of interior design includes a statement that begins "Designs are created in response to and coordinated with the building shell…"(National Council for Interior Design Qualification, 2004) thus leading to the conclusion that NCIDQ values contextual design as an integral part of "interior design." Is it really an integral part of interior design? If contextualism is an integral part of interior design, what aspects of the context are most important? In your experience, is contextualism significant in interior design education or in

interior design practice? How can contextualism become more significant in both education and practice?

Summary

This panel will address the lack of contextualism in interior design, which is an important issue related to interior design theory, design pedagogy, and design practice. As educators and practitioners in diverse specializations, the panelists will bring a variety of perspectives on this issue to the presentation thus provoking a spirited discussion of the opportunities available to designers and educators to include contextualism in interior design.

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Effects of Specific Color Wavelengths of Light on Human Psychological Feelings in the Built Environment – A Self Analysis

Kandace Fisher
Melinda La Garce
Southern Illinois University – Carbondale

Purpose

The purpose of this study was to determine if exposure to specific ambient colors of light and white light affect particular human psychological feelings. If there is an effect, what specific color wavelengths and/or white light affect which psychological feelings? If specific color wavelengths of ambient light and white light are found to affect particular psychological feelings, then therapeutic lighting interventions calling for specific color wavelengths could be prescribed that may improve the quality of life for individuals experiencing negative or undesirable psychological feelings.

Methodology

Data for this study was acquired from thirty hours of videotaped observation of the subject in an experimental lighting environment with ambient light levels sufficient to perform common tasks. Analysis of the data was made by tabulation through systematic observation of the occurrence of five identified psychological feelings (Wetterberg, et al., 1990). This study is a self-analysis in that the systematic observation is made by the subject. While some observable behaviors may indicate particular psychological feelings, many psychological feelings may not be observable but may be recalled as feelings as the subject is reviewing videotapes. The subject in this study was performing as an attendant to other research participants in a broader study and was not made aware of the purpose of this particular study or that they would be reviewing their own videotaped observation. It was important for the subject to be able to identify the psychological feelings they experienced across the thirty hours of videotaping under various color settings. The subject determined that these psychological feelings were: anxiety, stress, depression, happiness, and fatigue.

Protocol for the broader research study in which this subject performed as attendant to two research participants, called for each participant to spend five 3-hour sessions of exposure to five different colors of ambient light while being videotaped. This attendant/subject was, therefore, videotaped for six hours in each of the five specific color settings for a total of thirty hours. The five different ambient colors of light (white, blue, green, yellow, and red) are defined by specific electromagnetic wavelengths expressed in nanometers and ambient white light defined by color temperature measured in Kelvins and color rendering indices. The five 3-hour sessions were conducted over a 4-week period in a room with all white surface finishes and no daylight. The systematic observation process broke each 3-hour session into six 30-minute segments whereby the specific psychological feelings could be tabulated. Each of the five psychological feelings was defined by specific operationalizations. Comparative analysis was made of the tabulation totals across the five different color environments.

Summary of Results

This study found that feelings of happiness were most often experienced in the white and blue environments, and experienced least in the green environment; feelings of fatigue were predominant in the red environment, and found the least in the blue environment; feelings of anxiety were most often experienced in the blue environment and not found in the green environment; the blue environment produced a low occurrence of stress, but stress was not found in any other color environment.

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Graphic Communication Tool:
Visualizing Wayfinding Research and Site Criteria for Medical Facilities

Jihyun Song, ASID
Winthrop University

Joy H. Dohr, PhD, FIDEC, IIDA
University of Wisconsin-Madison

Purpose

The purpose of this study was to explore graphic communication tools for complex information concerning wayfinding design and involving process and place perspectives. Ultimately, we seek to assist designers, clients and users to interpret architectural interior design information and issues in a similar way early in a project.

Context and Process

Knowledge of wayfinding in large buildings has expanded in the past fifteen years. Yet, further work is needed in two respects. Design scholarship is needed to better understand a way to interpret, apply and communicate wayfinding concepts and research directives for the interiors of complex organizations, such as medical facilities. Secondly, users' wayfinding experience in these facilities needs to be visually communicated to further test design alternatives. From the beginning, clients and designers communicate with visual language as well as verbal. Clients seek comprehensive ideas to provide directions fitting their facility and staff/user needs. Plus, designers not only seek to understand the client's purpose and unique situation of a case, they must also communicate their knowledge of place design, human behavior and research-based criteria concerning wayfinding.

A research-based practice model and case study involved Memorial Hospital in Colorado Springs, Colorado, the Boelter Design Group (a research-based practice firm specializing in environmental graphics and design) and the design researcher. Site analysis, literature reviews, interviews with client-user teams, computer generated visualization and experimentation comprised procedures of the study. Developments and outcomes were shared with both hospital administrators and staff, as well as with the public through a design exhibition.

Summary

The result of this study is an integrated design template for use in both practice and academic settings. The template integrates research findings, site-specific criteria of clients and users, plus shows processes and decisions that are necessary to be taken when reaching potential solutions. It deconstructs and reconstructs key areas of consideration for Memorial Hospital and the Boelter Group, highlighting client/designer communication about wayfinding design early in the process of their project. Layout of images and text support research and design, plus illustrate sound graphic design principles. The physical typography, color, image and text layout further the interpretation and communicate processes from the designer's viewpoint. It was found to be effective as a communication tool by the design team and the client/user team. All work was implemented using computer technology, thus the template's format may be kept on file for use with other large building/wayfinding projects. The tool serves the visualization of design issues and design solutions along with recommended design suggestions. Augmenting

the template, computer generated images of three design alternatives and walkthroughs apply the concepts/findings, thus testing the experience of users. The integrated system provides cues and knowledge that may be seen and discussed by designer, client and users, essentially ensuring all involved have similar information and clarity of visual.

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Mixed Messages: The Impact of Design-Related Television Shows on Student Perceptions of the Interior Design Profession

Lisa K. Waxman
Florida State University

Stephanie Clemons
Colorado State University

Issue

The popularity of design-related television shows has been on the rise since 2000 (Bien, 2003). Within the same span of time, many interior design programs have reported significant increases in interest and enrollment (Bauder, 2003). Is there a correlation between these two phenomena? What perceptions are incoming students bringing with them regarding the profession of interior design? If design-related reality shows are influencing choice of major, are interior design programs attracting students who understand the skills required for the profession? Conversely, will new students become disillusioned when faced with the rigors of an academic design program that does not resemble perceptions gleaned from television? How do educators handle the increasing numbers of students when higher education budgets are being significantly reduced and seats are limited?

Methodology

The study involved students from two FIDER accredited interior design programs—one located in the South Region of IDEC, and the other in the Southwest Region. The methodology included two phases of data collection. First, entry-level and graduating interior design students were selected as participants in four focus groups of six to eight individuals to explore: 1) personal selection criteria for their major, 2) perceptions of the interior design profession, and 3) design-related television viewing habits of the students. The second phase of this study involved the development of a survey exploring the same issues, which was distributed to 120 students.

Summary of Results

The university in the south had a 131% increase in enrollment from fall 2000 to fall 2004 while the southwestern university had a 124% increase over the same time period. Over 90% of students reported they watched a home-improvement show at least once a week. Conversations with entry-level students revealed that they had received mixed messages from these shows regarding the skills needed to be successful in the field of interior design.

Many graduating seniors felt they benefited from the design shows that featured ASID and IIDA member designers working on realistic projects over a relatively long period of time, but definitely felt disillusioned by some of the shows featuring unlicensed designers working on quick weekend projects. Many students also felt these shows contributed to the challenge of explaining to family and friends the interior design profession, why they chose it as a major, and why it is a viable career path.

These findings indicate that interior design students are watching design-related television shows and these shows have some influence regarding the choice of college major. With this realization, it becomes more important that design programs fully explain what will be expected of new interior design majors as they begin their program of studies. Offering accurate

career information to youth in kindergarten through twelfth grade as well as their career counselors takes on additional importance as an additional strategy for informing incoming students.

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Emotional Response to Store Atmospherics and Its Taxonomy: An Adaptive Theoretical Paradigm

Kyu-Ho Ahn, Assistant Professor
California State University – Fresno

Cigdem T. Akkurt, Associate Professor
Iowa State University

Purpose

Due to the expansion of alternative selling channels, such as television and the Internet, an attractive store image and positive emotional experience in on-site stores have been becoming more critical to their success as retail environments. This concern is shared among designers and marketers. Several studies show that the emotional shopping experience influences consumers' purchasing behaviors (Donovan and John, 1992; Spies et al., 1997; Bitner, 1986; Baker et al., 1997). However, there is a lack of research on the interaction between the in-store environment and human emotion (Baker, Levy, & Grewal, 1992; Bitner, 1986; Donovan & Rossiter, 1982; Gardner & Siomkos, 1986; Kotler, 1974). Most business studies were conducted with few stimuli at a time in academic research with little realistic option.

Therefore, the purpose of this study is to propose a paradigm that explains the relationship among store environments, consumers' emotional responses, and environmental stimuli. It can be used as a guideline for store designers and marketers in the creation of an effective store design.

Methodology

Integration and synthesis of grounded theories were attempted, based on context analysis. First, a redefinition of terms was established, including emotion, cognition, pleasure, and arousal. Second, three grounded theories—the M-R model, Berlyne's aesthetic theory, and the Kaplan and Kaplan theory—were analyzed and integrated in relation to environment-emotional human reactions. Finally, establishing typology of environmental stimuli was conducted, based on critical analysis of business literature from a designer's point of view.

Summary of Results

The proposed adaptive theoretical paradigm explains a holistic picture of induced consumers' emotional responses within a store environment. "Pleasure" and "Arousal" are conceptualized as independents emotional dimensions, and the interaction is identified as an inverted-U shape of function of arousal under the condition of pleasure.

Taxonomy of environmental stimuli is presented in direct relation to the emotional dimensions: ambient factors and physiological factors are identified in direct relation to "Pleasure"; and sensory factors consisting of long-term factors and short-term factors are also identified in direct relation to "Arousal". Six-arousal control devices (Complexity, novelty, ambiguity, coherence, familiarity, legibility) are identified to control the environmental stimuli.

This framework also shows that there is a great potential for further research in both interior design and marketing. More detailed research is suggested to reinforce the proposed framework. Studies of a determination of arousal level, based on consumer groups and research on the specific function of each environmental factor, could feasibly be conducted.

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Collaboration Studio: Correlation between Design Outcome and Personality Types

Cherif M. Amor, Ph.D.
JoAnn Wilson, MFA
Texas Tech University

Purpose

At the end of the twentieth century, a growing interest has developed in collaborative education. In interior design, as in allied disciplines, this interest has been driven and compelled by global design perspectives, technological developments, and the information processing age. The National Architectural Accrediting Board (NAAB), the Foundation for Interior Design Education Research (FIDER), and the Landscape Architecture Accreditation Board (LAAB) advocate the implementation of collaborative learning within the same discipline and with related disciplines.

In front of this growing trend toward multidisciplinary learning, a substantive deficiency of collaboration is encountered among design disciplines—architecture, interior design, and landscape architecture. This lack of collaboration, accreditation boards' recommendations, and the pedagogic exigencies of the era compelled the development of an interdisciplinary studio course that brought together three design disciplines—architecture, interior design, and landscape architecture. The purpose of this paper is to measure the success of the collaboration studio in two ways: 1) test the correlation between design outcomes and personality types using the Myers Briggs Type Indicator (MBTI) and 2) identify the pros, cons, and consequences of the use of the MBTI.

Methodology

The research design encompasses two approaches: 1) The Myers Briggs Type Indicator (MBTI), a personality preference indicator**,** and 2) a qualitative investigation using a grounded theory approach based on participant observation and design outcome analysis. 102 students (30 architects, 56 interior designers, and 16 landscape architects) constituted the sample population that was split into ten groups—8 groups of ten students and two groups of 11 students. There was an average of five interior designers, three architects, and one to two landscape architects per group. Data were analyzed using two approaches: 1) analysis of process and design outcomes of the conceptual, schematic, preliminary, and final phases, and 2) open coding (Strauss & Corbin, 1990), which consisted of breaking down, conceptualizing, and reconstructing data in new ways.

Summary

Pedagogically, the MBTI permitted the grouping of different personality types, reflecting real world team experience that engendered not only diverse composition of student preferences but also rich diverse design outcomes. One significant finding is the strong correlation between personality types and design outcomes. There was a strong correlation between feelings and built form. Another finding, which also supports previous research, is that the presence of different personality types within the same group permitted the students to be learners and teachers at the same time. Nonetheless, the MBTI led sometimes to the composition of weak teams, although their personality types were different. Likewise, the disadvantage of the MBTI

established teams is the amount of time required for discussion, presentation, feedback, and completion of the project. Other findings will be discussed with the conference attendees for feedback and generation of further variables.

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How to Find Your Way and How You Do It:
A Conceptual Approach and an Educational Application

Deborah Belcher
Middle Tennessee State University

Purpose

Human movement within environments is based on cognitive mapping and wayfinding skills. A person "reads" the environment through the use of graphics, physical barriers, and subliminal wayfinding cues. Human orientation to an environment is the integration of covert or mental and overt or physical processes. This paper explores these wayfinding processes, the application of design elements and principles within built environments as related to wayfinding, and suggests an interactive, visual method of teaching wayfinding design applications and analysis.

Process/Context

The covert process consists of cognitive mapping and wayfinding skills that allow a person to become mentally oriented within the environment. A series of photographs of commercial, interior spaces/environments were reviewed and analyzed using design elements and principles as a basis for establishing subliminal wayfinding cues. It was determined that a person receives cues from the environment based on the application of design elements and principles that evoke movement (go) or non-movement (stop) within a specific space. A series of graphic devices were developed for analyzing subliminal, environmental wayfinding cues. These have been reduced to the following combinations: (a) go, (b) stop, (c) stop, go, (d) go, stop, (e) stop, go, stop, and (f) go, stop, go.

The overt process is a person's actual, physical movement through a space. This route through space is defined by the physical elements of the environment. Again, photographs of interior environments were analyzed according to circulation and activity zones and a series of graphics were developed to assist in the analysis. It was determined that an interior environment may have (1) activity and circulation zones, (2) activity within a circulation zone, or (3) circulation within an activity zone.

Summary

The findings and graphic devises developed were used to create a course lecture and an interactive, student friendly Reusable Learning Object.

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The Importance of Design Educator and Student Participation in the Legislative Process: A Discussion of Methods of Involvement and the Resulting Potential Impact on the Success of Legislative Efforts

Patty Blaser, ASID, IDEC
Brookdale Community College

Purpose/Issue

Legislative efforts throughout the United States and Canada are growing at a rapid rate. Currently 24 U.S. jurisdictions (see attached graphic) and eight Canadian provinces have enacted legislation governing interior designers. Coalitions are actively working in 14 additional states.

As interior design educators we are acutely aware of the fact that our students are the future of the design profession. Design practitioners and the major professional design organizations recognize that fact as well. In light of this, it is crucial that our students are informed participants in the legislative arena. In order for our students to be informed and involved, first our faculty must be informed and involved.

Process/Context

Panel discussions provide an opportunity for dynamic interaction between panelists and the audience. The panel assembled for this presentation includes design educators, students and practitioners who have first hand knowledge and experience with the legislative process. The moderator will provide background information and handouts from the ASID Department of Government and Public Affairs (see attached) on the current status of legislative efforts throughout the United States and Canada, as well as recommendations for student and faculty action. Panelists will provide their insights regarding best practices for involving educators and students in the process. Questions from the audience will be presented for discussion by the panel.

Participants will receive a package of materials that will assist them in explaining interior design legislation to their students while conveying the importance of the vital role both educators and students can play within their own jurisdictions.

Summary

As a result of the dialogue in this panel session participants will develop an understanding of legislative issues and recommended, successful methods to encourage student and faculty participation in the process.

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Firewalking: Threading your way through team assessment

Nancy G. Miller
Jennifer Webb
University of Arkansas

Purpose

The purpose of this research was to understand student participation in, and opinions about, team assessment and to provide guidelines for those who use collaborative learning in the classroom. Specific research questions included: (1) frequency of formal team-member evaluation use; (2) perceptions of honest responses on peer evaluations by both faculty and students; (3) reasons for not completing evaluations honestly; (4) role of previous teamwork experience upon honesty in answering evaluations; (5) role of attitudes about honesty of team-member evaluations upon grading methodology, and the (6) role of motivation to achieve upon honesty in answering team evaluations.

Context

The effectiveness of using teamwork in classrooms has been established by numerous researchers. Additionally, many faculty members believe teamwork enhances learning, how to give and take, thus provide crucial lifelong skills (Nilson, 2003).

Graduates in many disciplines utilize teamwork skills in the workplace (Wagner, 2002). Just as collaboration is expected in the workplace and must be a part of the graduate's toolbox of skills, assessment of process and performance is expected and must be a part of the graduate's repartee.

A review of literature delineated three types of assessment: (1) self-assessment of one's functioning within teams, (2) peer assessment of others within teams, and (3) assessment of team process by the team-members and/or instructors.

A pilot study explored attitudes and opinions held by students and faculty regarding teamwork in the classroom. Members of the IDEC listserv (n = 251) were contacted to identify interested participants. Twenty-one (8%) faculty representing 341 students expressed interest in participating in the teamwork survey. Seventy-one percent (n=15) of interested faculty representing 13 interior design programs and 62% of the students (n=213) from 10 college programs returned questionnaires.

Summary of Results

Addressing each of the research questions in turn: 1). Faculty reported using team evaluations 86% of the time while students reported their use for 75% of the team projects. 2). Means suggest differences exist between faculty (M=3.46, SD 0.54) and students' (M=5.41, SD 0.98) perceptions of honest answers on evaluations. Means suggest that students are not concerned that the others may find out (M=1.96, SD 1.47), are not concerned about hurting someone's feelings (M=2.29, SD 1.64), do not feel the need to be nice (M=2.38; SD 1.58), and in turn, they do not feel they will receive positive evaluations (M=2.80, SD 1.96). These findings are contrary to the qualitative answers revealed by the pilot study. 4). The role of previous

teamwork experience upon honesty in answering evaluations demonstrated no significant correlations between independent and dependent variables. 5). Honesty in reporting was not significantly correlated with any grading methodology.

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Action Research: An Interdisciplinary Approach to Portfolio Presentation

Phyllis Misité, Ph.D.
Rose Botti-Salitsky
Hans-Christian Lischewski
Mount Ida College

Purpose

The transformation of existing curricula requires the implementation of current hardware, software and faculty development. The inherent cost of curriculum development is not always available within department or college-wide budgets. Funding through the Davis Educational Foundation Grant was received by the college to help support faculty development towards the advancement of effective undergraduate teaching and student learning by infusing technology into pedagogy (Botti, 2004). The grant provided an excellent opportunity for faculty to restructure the portfolio presentation courses in the existing curricula.

The primary goal was to have students produce both a physical and a digital portfolio. The team also sought to present the course using a hybrid design where course materials would be presented, discussed and referenced by students from an online platform while workshops would provide hands-on use of software. Another goal was to teach the course in an interdisciplinary environment in order to combine the technological expertise of two faculty and foster an interdisciplinary environment between the interior design and fashion design students. The students had varying amounts of computer experience. This led to our final goal: to enable all students to produce a digital portfolio regardless of their computer skills.

Methodology

The methodology chosen for this research project was action research. "[Action research] gives educators new opportunities to reflect on and assess their teaching; to explore and test new ideas, methods, and materials; to assess how effective the new approaches were; to share feedback with fellow team members…" (North Central Regional Educational Laboratory, n.d, ¶1). Action research creates a cyclic or spiral situation alternating between action and critical reflection while moving forward during the project. The team met regularly to discuss student development and strategies for teaching and ways that the grant could provide resources to enhance the overall delivery of the course.

As part of the learning strategy, the WebCT platform incorporated discussion, quizzes, a place to post questions, and a place to report progress. Software options were demonstrated by the faculty and students worked on their required assignments during biweekly computer lab sessions.

In the first quarter of the semester, students were required to meet with the faculty member from their discipline to critique their work. The second quarter of the semester was dedicated to producing and enhancing their work digitally. The remainder of the semester required a series of assignments to be completed using three software programs.

Summary of Results

The ultimate goal was met: students produced a physical and digital portfolio. The ability to demonstrate a number of software options was feasible because of the experiences the two faculty members brought to the course. The interdisciplinary model also provided sharing among students with varying computer backgrounds and experiences based on their design curriculums. The action research methodology gave us "permission" to explore options throughout the semester and change direction as needed while retaining our other goals: (a) teaching using a hybrid model, (b) retaining an interdisciplinary environment, and (c) providing students software options based on their computer skills. Further investigation is needed in determining the appropriate balance between the online and the face-to-face environments.

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Creating a Sustainable Design Area of Emphasis in a FIDER Accredited Program of Interior Design

Julie Stewart-Pollack, ASID, IDEC
Lauren Pillote, ASID, IDEC
Rocky Mountain College of Art & Design

Purpose

The demand for innovation in design is driven increasingly by globalization, expanding populations, and limited resources. As a result, the design of the built environment has become a complex, interdisciplinary pursuit with a growing need for collaboration. One area of interior design education that is well suited to addressing this need is the study of sustainable or green design. Sustainable design involves using design methods, products, and processes that minimize the ecological impact of design and construction upon the earth and all of its species and that cause the least possible effect upon the ability of natural environments to maintain their natural balance (Papanek, 1995; Van der Ryn, 1996).

The principles and practice of sustainable design do not belong to one discipline. Rather, they are derived from many diverse disciplines including: environmental design, environmental psychology, ecology, evolutionary biology, sociology, architecture, interior design, urban planning, and landscape architecture.

If interior design students are to learn to successfully design with ecological responsibility, they must first become aware of and ultimately develop a working knowledge of a range of related applicable philosophies, principles, processes, and technologies that provide the foundation of sustainable design. The challenge, therefore, is to successfully integrate this multidisciplinary information into the curriculum of a FIDER accredited interior design program. The purpose of this paper presentation is to discuss how one interior design program has addressed this challenge and to examine guidelines that may be helpful for other programs that want to pursue a similar goal.

Process

Information was collected and organized from the disciplines described above during a four-year period by one professor with the assistance of six undergraduate interior design students as part of their research internship. Methods of collecting information included: review of literature, interviews with sustainable/green design experts and visionaries, review of course content in other sustainable/green design courses, review of case studies, interviews with faculty and administration in related disciplines, review of curricula in related disciplines, focus group discussions with design professionals, internet searches, examination of sustainable design emphasis and attitudes within professional design organizations, and examination of green design products and technologies.

Content analysis was used to identify key concepts and relationships of concepts from printed materials across disciplines. This information was used to develop new course content and to integrate sustainable principles and practices into the existing curriculum. It was also used to illustrate relevance of a sustainable design area of emphasis to the college administration, and curriculum committee.

Summary of Results

Two important concepts emerged from the analysis of this diverse information:

The complex issues and technologies that form the foundation and practice of sustainable design are best studied as part of a "system" for the design of the built environment in which patterns of relationships are studied enabling students to develop awareness of the complexities, interdependencies, and continuous evolution of sustainable design and the role of interior design as part of the whole system (Brown, 2004; Cortese & McDonough, 2001).

The information gathered reveals that this model for studying green design can further enhance a FIDER accredited program's ability to meet FIDER standards.

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Political Interiors: Design of the Domestic Realm in the German Democratic Republic

Lois Weinthal
The University of Texas at Austin

Purpose

This paper examines the influence of politics and economics in the shaping of the domestic realm in the German Democratic Republic (GDR) from 1961-1989, the years framing the construction and demolition of the Berlin Wall. The political ideals of socialism established in the GDR under Soviet sector control after World War II reached the larger urban realm through monuments and buildings, but also materialized in the production of goods for the domestic interior. This can be found through the influence of Soviet technology that contributed to developments such as plastic molding techniques for furniture and domestic goods. The goal of providing mass-produced goods to a new socialist society meant that items were available to all the citizens rather than forming class distinctions. Mass-producing techniques would contribute to shaping an identity in the GDR interior through additional products that include textiles, graphics, clothing and dishware. At a more intimate scale, the interior is further investigated to see how individual identity is established through layers of personal possessions and clothing.

Methodology

The framework for this project begins with layers found upon the interior that start with the body and generate outward including clothing, furniture, personal possessions and interior surfaces.

Research for this project was undertaken in Germany for a total of eight months. These research trips included interviews with city and museum officials, along with visits to archives, museums and libraries that provided information and images from original sources such as GDR design journals and museum collections.

This paper begins with historical background on the formation of the GDR in order to link its political and economic influence to the domestic realm. As a newly acquired country in the Soviet Bloc after World War II, the GDR would be designated as the producer of domestic goods, which would result in new materials such as plastics, polyesters and laminates, all of which would appear in the interior as clothing, furniture, and textiles. These materials were pervasive in finding their way into GDR interiors and were advertised to its citizens as being modern and improved from the materials they were previously familiar with, such as wood and metals, which were now reserved for heavy industries in other Eastern Bloc countries.

Summary

The result of this research seeks to locate the role of interiors in the larger political and economic realm. As the GDR sought to provide equality to all of its citizens, issues of identity and loss of identity come to the foreground. At the present, we face a similar situation in which furnishings are mass-produced and made available globally, such as with the company IKEA. This research acts as a springboard for further investigation on the role of uniformity in interiors as mass-

produced goods are offered globally. It leaves us asking if communal identity is replacing individual identity.

Reflections on the Value of Service Learning in Design-Related Programs

Marie Gentry, Ph.D.
Laurie Fields, M.L.A.
University of Arkansas

To be comprehensive, design curricula, in addition to performance objectives, should include behavioral objectives that prepare students for active community participation and leadership. The importance of public service is reflected in many university mission statements and in current FIDER and CLARB accreditation standards that require incorporating service-learning experiences in the curricula. Research confirms that service learning can benefit students, faculty, institutions, and communities by offering "real-world" experience to students and quality design solutions to communities or organizations (Astin & Sax, 1998; Hesser, 1995). Research regarding outcomes for faculty is, however, less compelling.

This presentation will review a service-learning project that successfully integrated several pedagogical strategies, including interdisciplinary collaboration and a post-design immersion experience. The nature of the project provided unique opportunities for students to understand the role of public service in making meaningful societal contributions, developing awareness of cultural diversity, and attaining a global perspective.

Process

This presentation examines a 4-week collaborative studio project that joined Interior Design and Landscape Architecture students. An international not-for-profit organization invited students to create a 'global village' where visitors would engage in an immersion living experience. The project goals included creating a master plan for eight villages, agricultural fields, and animal enclosures on a 10-acre site. Structures in the village were designed to interpret the vernacular architecture and interiors of developing countries. The scope and complexity of the project offered an ideal opportunity for cross-disciplinary collaboration.

Initially, students individually researched and graphically presented information on cultural parameters, agriculture and food production, settlement patterns, climatic conditions, interior space and artifacts, and construction techniques and materials. At the interim design review, clients selected eight countries to develop. Multi-disciplinary teams developed a series of boards that addressed site analysis and design, a variety of building types, construction techniques and materials, and a written concept statement.

Summary

This project was chosen for its physical complexity, social and political urgency, and the opportunity to address several issues of interest to university administration and accreditation boards. Students expanded their understanding of global issues of poverty and resource management through sustainable design. The client benefited from the project by having a master plan and detailed design that allowed them to proceed more quickly with their educational goals. The interrelationship between the students and client continues as the students participate in the immersion learning experience. They will have the opportunity to evaluate their work and to assess the clients' educational objectives.

This presentation documents a service-learning project that successfully accomplished several learning objectives that are mandated by university administrators and accreditation boards. The nature of this project and the flexibility of the client may have contributed to its success. The presenters intend to use this project as a framework to stimulate discussion about the merits and pitfalls of service learning. Using design to benefit communities is a worthy goal for both students and the community. The types of projects and clients must be carefully considered to determine that they will advance the objectives of learning to be good designers who are sensitive to contextual, social, and political issues.

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The Expression of Design + Innovative Presentation Techniques

Jeff Johnston
University of Nevada Las Vegas

Purpose

How can we as educators best prepare our students for the demands of working in a profession that requires graphic communication and design be combined with technology and still assert an affinity to ways of the past? The question answers itself: we combine hand sketching with progressive techniques and technologies used in many of the professional offices today. It is our responsibility to prepare our students with a foundation of knowledge, which propels them into the job market. Let's give our students an edge, let's prepare them with graphic erudition, which affords them sound "hand graphic" proficiency coupled with the use of ground-breaking rendering technology.

Context

Hand sketching is alive and well in most AE&I firms across the nation. The ability to quickly sketch an idea for a client or produce a quick color sketch will always be necessary. The use of hand graphics in the genesis of design or the conceptual stage is a standard. Conceptual design has a need for free-flowing thought, only through many failures do we obtain success and to be successful we must be capable with our hands graphically to communicate our ideas. Only through simple hand sketching, are we able to craft innovative and visionary solutions. Modern technology can only enhance what the hand has created; however, in our profession we are budgeted a small amount of time for the design process. Using a machine to render drawings permits a project manager to cut the time spent, and lends flexibility to change within the design itself yielding minimal loss of time and budget dollars.

Curriculum for foundation level courses exploring techniques of design communication and integrating multi-media methods and tools for architectural presentations is the basis of this research. While practicing in the profession, I have noticed client response to a hand-produced graphic increased when the rendering was produced using multi-media technology. This relatively simple rendering technique is achieved when original artwork or Auto Cad drawings are placed into Adobe Photoshop and are then rendered using a variety of tools and methods.

Summary

Students seem to understand the gist of this process and use these techniques as a presentation tool to polish their design process drawings, finalized plans and perspective sketches. They also see the merits of using Photoshop for board composition and layout. By resaving the file and changing the color fills they can rapidly produce several color scheme variations in a short amount of time. There is no limit to what or how our students can create innovative solutions and presentations. I have found by using my personal web site as a resource, students are able to access step-by-step methods and techniques discussed in class, which gives them the flexibility to explore and utilize their own creative approaches in class, or on their own time. As society moves to a paperless environment, it is necessary to keep on the cutting edge of new technologies while keeping a high regard for the artistic skills of the past.

Dorothy Draper and the Moderns: A Comparison of Values

John Turpin
Washington State University

Purpose

The years between 1930 and 1960 seem to offer a paradox when considering the prevalence of the Modern Movement in the historical narrative of the design histories and the corresponding popularity of the work of numerous decorators, Dorothy Draper included, who very likely worked outside this paradigm. Contrary to most histories of the mid-20th century, this paper will allow Dorothy Draper and the Modern Movement to enter a dialogue by comparing the values embedded in their writings and projects.

Methodology

This paper utilizes the values of the Modern Movement—decompartmentalization, social morality, truth, total work of art, technology, function, progress, anti-historicism, abstraction, internationalism / universality, transformation of consciousness, and theology (excerpted from Greenhalgh's (1990) *Modernism in Design*)—as a framework for discussing Draper's values as manifested in her writings and projects. The interpretive process will be grounded in post-structuralism. "In this approach, the context informs us of the social factors that frames the signs and allows us to analyze both the events of the past and our own contemporary interaction with it" (Beecher, 1998, p. 6). The intent is to identify what Modern Movement characteristics Draper embraced and perhaps more importantly where she diverged.

Summary

In the final analysis, Draper shared only a few of the Modern Movement values (social morality, function, transformation of consciousness, theology). When she diverged, the author identified values such as illusion, experience, customization, collage, historicism and heritage. What seems clear is that Draper is, in fact, not a modernist, but a romanticist. Many of her values refer to escapist ideals similar to those in English Baroque gardens of the 18th century. Draper transports the visitor to another time and/or place through the design of a grand stage set giving attention to every last detail. Her success seems to be based on the fact that she was able to utilize her own 19th century Edwardian values and reinterpret them for a modern, 20th century society. Furthermore, one could argue that during these turbulent years between 1930 and 1960, Draper's optimistic designs provided much needed opportunities for escape—spaces to heal—as opposed to dealing with the harsh realities of the global community.

Since historians have embraced the Modern Movement as the prevailing design philosophy of the 20th century, Draper has been ignored because she did not seem to make any significant contributions. However, what is of even more importance is the notion that there is a latent Romantic Movement during the middle of the 20th century that has been heretofore ignored or at least marginalized. Considering Draper's popularity, scholars should be questioning the prevalence of modernism because a significant portion of society clearly embraced romanticism. A larger study may reveal that this Romantic narrative is where interior

decorators and designers of the 20th century make their most significant social contributions. If this is the case, the co-existence of these two narratives would create a much more dynamic "history," for it is through opposition that a concept finds meaning and value.

Note: This research was possible, in part, thanks to a FIDER/Polsky Furniture Fixtures grant.

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Importance of *Sense of Place* and *Sense of Self* in Residence Hall Room Design

Stephanie A. Clemons, Ph.D.
David McKelfresh, Ph.D.
James Banning, Ph.D.
Colorado State University

Purpose

Higher education institutions have been examining the design of interior spaces in their residence halls in an effort to improve conditions for over a decade. New residence hall models have focused on the public, shared, and common spaces in the residence halls (Godshall, 2000). Little literature can be located concerning how the concepts of sense of place and sense of self have been applied in relation to the design of residence hall rooms, shared or private. Attachment of sense of self to smaller elements of the physical environment has crucial implications for developing a sense of place in the college residential setting. The purpose of this study was to assess the perceptions and attitudes of students toward their residence hall rooms and how they modify their interiors to reflect a sense of place and sense of self.

Methodology

Two focus groups were held at a four-year institution approximately four weeks into the semester. Three researchers were involved: student affairs administrator, environmental psychologist, and an interior design educator.

Participants were self-selected from an introductory interior design course of 150 students. Of the approximately 30 female volunteers, two focus groups were formed. One group felt they achieved a sense of place and sense of self in their residence hall rooms, while the second group did not. General questions concerning the ability to express self and place were posed to the participants. An inductive strategy for analyzing the data was employed. Responses were analyzed with the goal of discovering major thematic components.

Summary of Results

Three themes emerged from the data that provided organization for the findings: strategies for achieving sense of self in a residence hall room, barriers encountered in achieving a sense of self in a residence hall room, and importance of small artifacts. Focus Group One expressed self through color, functionality, arrangement of furniture, personal belongings, decoration of entry door, lofts, photographs of family and friends, books, and bookshelves. Perceptions indicated that the residence hall rooms were particularly lacking in quality light. Barriers to expressing self included awkward placement of outlets, Internet, and entry doors as well as inconsistent wall textures that made personal objects difficult to adhere, lack of tackable surfaces, lack of shelves, color of standard white paint, and storage space. Interestingly, Focus Group Two cited similar barriers as Focus Group One.

Based on this qualitative study, not many changes have been made to residence hall room design in the last 40 years. They still lack space, storage, and the ability to personalize.

Participants seemed to have good ideas to express place and self, but seemed discouraged by materials, existing furnishing, or university policies.

Stress on students, and particularly on incoming first year students, can be significant. As Boschetti (1995) indicated, "Because possessions are small, tangible, and portable, they represent pieces of the environment over which the person has the most control" (p. 10). It is important for students to transform a new space into a place with meaning.

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Catching the Poetic Essence of Interiors in Daydreaming

Jin Feng
Iowa State University

Purpose

A great design reaches into the depth of the human experience with its poetic power. To teach the design students to reach the depth of the poetics of space is a challenge to interior design instructors. From a pedagogical viewpoint, the first step in such an effort may begin with sensitizing the students to allow them to sense the poetic essence of an interior. This requires the students to have an ability to see through the prosaic issues that hovering over any design projects to grasp the most significant experiential characteristics of an interior. The complexity and dynamism of human experience make this task very difficult. Unconventional approaches are needed to achieve it. In a graduate seminar focusing on the issues of poetics of space, daydreaming about a space was experimented as a way to reach the poetic depth of that space and make the implicit and elusive experience into explicit and accessible imageries that can be further analyzed.

Process

In a graduate seminar, we tried to explore the issues on the poetics of space. Inspired by Bachelard's book *The Poetics of Space* (Bachelard, 1964), we experimented in an exercise to use daydreaming as a special way to explore the poetics of a space. The interesting results encouraged one student to use this approach in a more extensive term project. In the exercise, the students were asked to daydream about a self-selected space and to record the resulting imagination. According to Bachelard's descriptions of the mental state of daydreaming, the students tried to free their minds from the active thinking about the environment and open to the imagination that came naturally. After the imageries were recorded, the group used thematic analyses to identify the significant experiential characteristics as reflected in the imageries. In the student's final term project, photographs of interior spaces were selected from books and magazines. The student looked at the images and went into daydreaming. After the daydreaming was over, the imagination was recorded and represented using Photoshop. The daydream imageries were then analyzed to extract the experiential themes of the space.

Results

The students' exercise resulted in very interesting imageries in their daydreaming that reflected the essential experiential characteristics of the spaces they tried to focus on. No difficulties were reported for the assignment. In the presentations of imageries obtained in daydreams, resonance of the poetic themes was frequently observed among the students, even when some of the imageries appear to be in fact unusual and absurd.

Summary

It is interesting to see from the result of our experiment that it is possible to direct daydreaming toward a particular space. The imagination resulted from the daydreaming exercise

can indeed reflect the significant poetic themes of the space, although the imagery may appear to be unrelated directly to any architectural theme. The shared resonance among the students indicates that the poetic themes derived form daydreaming can indeed reach the depth of the consciousness. In future explorations, it would be interesting to investigate how different the outcomes will be from different persons daydreaming about the same place. The recorded imagination produced from photographs indicates that images of spaces can be used for this kind of investigation. But whether there is significant difference in the outcome is still a good question to be answered.

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Teaching Exhibition Design in a Graduate Interior Design Program

Stephan Marc Klein
Jon Otis
Pratt Institute

Issue

Exhibition design holds great potential for interior design education and practice. However, it is an area of design that receives little or no attention in most interior design education programs, and interior design professionals rarely become involved with it. This paper discusses why exhibition design can be an important part of interior design, what makes it unique, issues involved in teaching and practicing it, career opportunities available to design professionals, and exhibition design's potential for addressing critical issues and encouraging social change.

The paper describes a nine year-old program in the Graduate Interior Design Department at Pratt Institute in Brooklyn, NY, "The Exhibition Design Intensive (EDI)," created by Professor Klein and now taught by Professor Otis. Students opt to take the EDI in lieu of doing a traditional thesis. Instead, they spend a year in intensive study of exhibition design. Students most often design exhibitions in teams, analogous to the situation in the professional world. They become involved in exhibition development through doing research and writing scripts for their projects. They have designed and built full-scale exhibitions for real clients in real settings. Students also learn to critique exhibitions. Project contents frequently focus on social, environmental, and political problems.

Process/Context

The paper describes examples of both museum-based and commercial EDI exhibition projects including: a built exhibition focusing on the efforts of New York area community groups; a built traveling exhibition dealing with disabilities and universal design; a semester-long entire-class team project during the 2001/2002 academic year that designed a permanent exhibition that would go in a museum at Ground Zero in New York City; team projects to design an exhibition about the persecution of homosexuals in Nazi Germany to go in the Holocaust Memorial Museum in Washington, DC; an exhibition about the plight of Islamic Women living in fundamentalist conditions; an exhibition on Hip Hop and the emerging urban voice; and a project exploring new directions in retail.

Summary

The paper discusses issues of exhibition design practice and of its impact, including: why interior designers are potentially positioned through their education and professional world view to be team leaders on exhibition design projects; exhibition design and enhanced employment opportunities for interior designers; relevance of teaching exhibition design for all interior designers' educations; differences and similarities between exhibition design and other forms of design; between museum-based exhibition design and commercial exhibition design; between interpretive exhibitions and object-centered exhibitions; exhibitions as multi media and multi-

sensorial experiences; the diachronic nature of exhibition design and its relation to theater and cinema; the role of narrative in exhibition design; the roles museum play in the production and reproduction of social relations, how museums use exhibition design to make truth claims; how exhibitions can use design to critique societal inequities and to raise social, cultural, and political issues; and how exhibitions can be forces for social change towards creating more just and democratic societies.

Adaptive Use of Interior Spaces in Historic Downtown Properties

Terry Rothgeb
Bryan D. Orthel
University of Kentucky

Purpose

As the result of urban sprawl, the traditional commercial districts (Main Streets) of America's communities have moved from downtowns to by-pass intersections. Recent commercial developments abandoned established business districts and eroded the communities' unique identity and sense of place by creating anonymous landscapes. Communities encourage the adaptive use of vacant downtown buildings to minimize the sprawl's effects on service infrastructures, revitalize traditional districts, strengthen economic vitality, and protect their distinctive character. Local planning regulations rarely consider the impacts of adaptive use on historic interior spaces.

The adaptive use of historic interior spaces suffers without guidelines to advise the design process. Character-defining interior spaces of historic structures deserve the same level of attention as exterior features. Federal, state, and local preservation policies rarely suggest more than technical methods for conserving historic finishes and materials. The purpose of this research project was to assess the need for design assistance in adaptively use of historic downtown properties and to develop a methodology for systematically surveying historic interiors in traditional commercial districts.

Methodology

This research project included a national survey of Main Street Program managers, documentation of interior spaces in downtowns, and concurrent review of existing preservation guidelines published by federal, state, and local governments. The national survey of sixteen hundred participating Main Street Programs, endorsed by the National Main Street Center, queried program managers and preservation professionals about issues affected adaptive use projects in traditional commercial districts. The data was statistically analyzed to determine significant interior issues to be addressed by the research project. In consultation with the state Main Street Program, three towns were identified for a pilot study to assess documentation methods. The selected towns vary in population, age, development pattern, and regional location.

From the three towns, the research team identified ten interior spaces (rehabilitated and un-rehabilitated) for documentation. A condition assessment was created to consistently evaluate the space's conditions and characteristics. Documentation variably included archival research, visual survey of interior characteristics, photography, and measured drawings. The documentation process included interviews with individuals associated with the selected properties. The collected information has been cross-referenced to existing guidelines and fundamental design concepts to identify concentration areas for future research.

Summary

The authors have documented adaptively used historic interior spaces in three representative towns. A survey of preservation professionals nationwide regarding issues inhibiting adaptive use projects in traditional business districts was conducted. The findings reveal that adaptive use faces design problems related to universal accessibility, spatial relationship to use, HVAC systems and human comfort, and the integration of new technologies. Indoor air quality, hazardous substances, energy efficiency, and sustainability must also be addressed by interior rehabilitation projects. The lack of up-to-date information on these topics results in uncertainty about the course of adaptive use projects. Without information, detailed attention is not given to interior spaces, perpetuating the myth of low cultural value assigned to historic interior spaces. The findings validate the need for further research regarding adaptive use of historic interior spaces in traditional commercial districts. This information will guide Phase Two.

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Student Visions: Using Photoethnography to Facilitate Student Participation in Classroom Re-design

Cindy V. Beacham, Ph.D.
Barbara S. McFall, Ph.D.
West Virginia University

Purpose

The purpose of this pilot study was to "determine student perceptions of a 'student-centered' classroom through photographic representations." This research was undertaken as preliminary programming for the redesign of public Family and Consumer Sciences (FCS) classrooms. The targeted classrooms will be implementing a new teaching model, Personal Resource Systems Management (PRSM), having the primary goal of fostering the development of healthy, caring, and responsible individuals. Prior studies indicate that such development is the prerequisite foundation for educational success and productive behaviors (Search Institute, 1997). PRSM has been piloted in school districts throughout Pennsylvania since 1998. By working directly with students to collect their ideas about classroom redesign, this study has established a preliminary set of physical attributes for middle and high school classrooms that is genuinely responsive to the emerging mandate for *learner-centered* lifelong learning.

Methodology

A multi-method approach was taken for this research project to enable the researchers to collect visual images from the students and clearly understand their intent behind the images. A modified photoethnography was used as a primary methodology to allow students the freedom to visually represent their ideas for classroom characteristics without being "led" by researcher-identified concepts. The photoethnography was supported by individual interviews to clarify the students' representations.

Students who participated in this initial pilot study were enrolled in FCS classes from 2 middle schools (n=33) and 1 high school (n=22) in western Pennsylvania. Schools were chosen on the basis of active implementation of the PRSM model in their classrooms and teachers' willingness to involve their classes in the study. Students were provided with cameras and worked individually or in teams to gather their personal images for a new classroom. Individual interviews were conducted with each student or pair of students, and participants were asked to explain their reasons for taking each picture and how it related to the redesign of the FCS classroom.

Summary of Results

The 55 participants provided over 350 pictures to be sorted, coded, and discussed. Each participant who provided photographs also participated in the individual interviews, so all sets of photographs had accompanying explanations. All interviews were transcribed and data were organized based on the 6 types of environments and 3 personal aspects identified in the PRSM model. Overwhelming consistency was found in the ideas expressed by the students.

Forty individual characteristics were identified as important to the students. These included elements such as environments that allowed for comfort and relaxation; more interest in the classroom by using color, details, and art; variety and flexibility in lighting; more supportive furniture; and more access to resources such as reference books, computers, and magazines. Interpreting the data through the PRSM model, students felt generally supported with regard to developing mental aspects, but were clear in their opinion that the emotional and physical aspects of daily experience were not well served by the current classroom environment. Additional data is needed from adult stakeholders (parents, teachers, administrators, etc.) before a final recommendation can be made for the FCS classroom.

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Choices and Applications of Natural Resources in Minority Folk Dwellings of China's Northwestern Yunan Province

Wei Dong
Li Han
University of Wisconsin - Madison

Ren Wendong
School of Art and Design, Dalian, China

Purpose

The intent of this presentation is to demonstrate the creative approach of how natural materials are used to create the unique built environments of the ethnic culture groups in Southwest China. These ethnic groups have a long history of applying a sophisticated philosophy, practical procedures, and a distinguished character in their use of natural materials to architecture and interior design. By examining these successful examples, our students and practitioners may benefit from the design concepts and applications used by these Chinese ethnic groups. This examination may then inspire and encourage students and practitioners to create a new form of design that harmoniously integrates natural materials with the design.

Process

The minorities in Yunan gradually evolved from an original dependence on raw nature to provide shelter, such as cave-dwelling, into modifying nature by choosing locations and materials to build homes that were suitable to their local geographic and weather conditions. Yunan minorities stress harmony combined with nature in their dwelling style. The minorities worship nature, and it is from nature that they draw much inspiration. They will abstract a natural form into a form that improves function to fit a need, yet is still in harmony with the environment. These ethnic groups have a long history of applying a sophisticated philosophy, practical procedures, and a distinguished character in their use of natural materials in architecture and interior design. We are faced with a challenge to educate the next generation of scientists and designers to have a better understanding of the harmony between natural materials and the living environment. We must teach them how to be sensitive to natural materials, and encourage in them a desire to extend the strength of natural materials. Ultimately, we must teach them how to create a new balance between our built environment and the biodiversity of the natural environment.

After completing field studies and interviews of local villagers in China, we found five major types of natural materials that are used in a distinguished way. These five material types are bamboo, stone, wood, dirt, and weeds. In this presentation, we will introduce each of them in four categories: first, the nature and character of the material; second, the local custom and philosophy of using the material; third, the uniqueness of construction methods for use of the material; and fourth, the potential applications in today's architecture, interior design, and furniture design.

Summary

Knowledge of how to use natural materials in interior design has gradually decreased with modern technology. New technologies have allowed for new methods of using materials

that have reached a high degree of engineering and abstraction. The challenge facing us is to educate our next generation of designers to have a better understanding of the harmony between natural materials and the living environment, a sensitivity of and desire to extend the strength of natural materials for building, and in the end, to create a new form of design.

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Promoting Healthcare Design Research: Motivators and Facilitators

Theodore Drab, IDEC, ASID, IIDA
Carol Bormann, IDEC, IFMA
Lisa Vogel, Ph.D., IDEC
Oklahoma State University

Purpose

The ongoing efforts of the Foundation for Interior Design Education Research toward the achievement of high quality interior design education are closely linked with those of the Interior Design Experience Program and the National Council for Interior Design Qualification, which address the training of recent graduates within the workplace and the examination of candidates for acceptance as design professionals. Though these organizations monitor the processes commonly viewed as integral to the definition of a profession, namely education, experience and examination, widespread public acknowledgement of interior design as a profession has yet to be achieved. This paper explores the demonstrated success of interior design educators in conducting research applicable to both the protection and promotion of health.

Context/Process

Recently the National Council for Interior Design Education published the NCIDQ Definition of Interior Design. That definition states "Interior Design includes a scope of services performed by a design practitioner, qualified by means of education, experience, and examination, to protect and enhance the life, health, safety and welfare of the public." Without the research base as a foundation, the success of designs may not "meet all public health, safety and welfare requirements, including "code, accessibility, environmental, and sustainability guidelines" and "socio-psychological…and safety requirements."

In order to establish some evidence to support a more positive view of interior design's role in protecting and promoting health, safety and welfare issues, a study was conducted to assess scholarly activity in healthcare design. Since the educational environment would be the likely source for students' training, faculty research papers in this critical area were reviewed. The study was limited to proceedings of national conferences of the two principal faculty design organizations.

Summary

Paper or presentation abstracts from IDEC conferences were compared with abstracts in proceedings during the same time period of the Association of Collegiate Schools of Architecture (ACSA). This preliminary study confirmed that 1 out of 20 interior design educators are sharing their focus on in areas related to healthcare and with their colleagues at the IDEC International Conferences. At the ASCA Conferences the ratio was 1 out of 126. Since educators from both groups may be presenting their research at other venues not included in this survey, further studies might be conducted to gauge contributions of interior design and architecture educators to health and safety issues. Interior design educators have demonstrated, in their published research, a strong commitment to protecting, promoting and enhancing the

health, safety and welfare of the public. Having made significant contributions to the body of knowledge in healthcare design, research should expand from eldercare issues to encompass a wider array of health-related issues. By soliciting funding from State and local agencies, interior design scholars can change the perception of interior design within those agencies and within those States to one that accurately reflects the profession's commitment to the public's health, safety and welfare. Educators who include students in the research process help enrich both the undergraduate and graduate academic experience.

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Scenic Design for the Cage Gallery Plays: Interdisciplinary Approach of Theatre and Interior Design

Jinbae Park, Ph.D.
Howard Blanning, Ph.D.
Miami University

Purpose

This study is an interdisciplinary approach requiring Interior Design students to create scenic design solutions for an actual theatre production. To create specific design elements to exclusively support the actors and the story, this approach requires detailed analysis of plot, structure, forward dramatic strategy, and every single behavior of the characters prior to design execution. The whole process of scenic design is an excellent experience for students to understand the notion of design based on human behavior, and also the symbolism of design elements. This study also helps students understand the real construction process based on their drawings. Actual engineering and construction of the set allows the students to experience the completion of the design project. The study let students gain new respect for the space/user relationship, and envision that correlation more holistically in the future.

Process

The process began with the selection of two original plays by the Theatre department through an international workshop competition. Interior design students read, noted and researched the language and meanings within the plays in order to understand the playwright's intentions and create a set that maintained the essence of the plays. Two theatre professors visited the studio regularly to help explain the processes that the playwright, the designer, directors, and builders must go through to create a space that can accommodate the actors and their movements. Students learned that even while the actors are not on stage, the set instantly produces the tone for a play and essentially becomes an additional character. While the actors are present, the stage not only guides and supports their movements, but also enhances the underlying theme of the script. The class split into six groups of two or three students, and began to develop personalized ideas and feelings about the two different plays. From the storyline, each team developed concepts and driving images for the play. Every line and gesture from the two plays was meticulously considered in the proposals for the design. Throughout the project, any problem or design decision the students faced was resolved by the constant reference to the scripts. The finalized projects were presented before a panel of reviewers from theatre, architecture, and interior design. The student teams produced six innovative and striking design solutions, and one team's design was selected and executed into the real set construction.

Summary of Results

This interdisciplinary approach in the interior studio program contributes towards acquiring an interest and knowledge of interdisciplinary resources of the theatre. The value of this approach also comes from detailed analysis of the human behavior based on the notion of supporting actors' behavior, and recognition of the variety of actions with each individual object in each

different setting and how all elements integrate to communicate the aesthetics and meanings of the pieces to the audience.

Aesthetic Composition and the Language of Light, a Subject of Academic Inquiry

Nancy Clark Brown
Washington State University

Purpose

This study explores light as a design element in the composition of interior spaces. An analysis of two graduate-student projects demonstrates the potential in considering light from an aesthetic perspective. Further, the projects demonstrate the gap between the language used in the composition of interior space and the language of light.

Process/Context

It is apparent that when teaching lighting to interior design students there is a gap between their understanding of the technical aspects of lighting and the effect of light as a design element on three-dimensional spaces. Students manipulate and understand the basic elements of shape, form, and color as compositional generators of an interior design project. However, if one raises the question of light, they go directly to the fixture. Lighting design is usually taught from a technical and functional perspective such that topics include human perception, psychology, lamp technology, electricity, photometrics, and luminaries. What is missing is the assimilation of lighting perspectives and the aesthetic language of design.

Although a review of lighting texts reinforces the importance placed on design, the terminology used to describe the composition of light is distinct from the terms used to discuss, evaluate, or describe spatial compositions in interior design. For example, Gordon's lighting design methods focus on visual clarity and simplification of the environment, rather than on composition. Luminance patterns and methods for lighting architectural surfaces are presented with the goal of establishing the physical boundaries of the space, providing direction, and reinforcing spatial form with minimal distraction (Gordon, 2003). Missing from the design discussion and presentation (in the form of photographs) is the use of common design vocabulary as it is understood by interior design students. Terms such as rhythm, scale, shape, and form are used much less frequently when describing light, and rarely in the context of describing light relative to a design's composition.

With this in mind, graduate students were directed to develop projects using a variety of light boxes to explore light as an aesthetic component. Both projects presented were developed over nine months in combination with literature reviews, case studies, and three design phases.

Summary

Both studies demonstrate the rich potential of light as an object in the composition of interior space. Further, they demonstrate the need for the development of a framework for designing and understanding light from a compositional perspective. Aalto and Holl are among those architects whose work is defined by captured light. Few interior designers are recognized for using aesthetic theories of light. The studies presented reinforce the importance of bridging the gap between the language of design and the language of light. The emerging aesthetic theoretical constructs are the most significant aspects developed by these graduate-level projects.

They demonstrate the potential of light as a design medium in much the same way that the artist uses color to compose a painting or a poet uses words to craft emotion. That is, light itself has inherent characteristics, qualities, and effects that can be manipulated to enhance the visual effect of interior space.

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Creative Scholarship / Objective Research: Separate But Equal?

Jean Edwards, MFA
University of Louisiana at Lafayette

Carl Matthews, MS
University of Texas at Austin

Panelists:
Jane Kucko, PhD
Texas Christian University

David Matthews, M.Arch
Ohio University

John Turpin, ABD
Washington State University

Purpose

The purpose of this panel session is to examine the fundamental question: "Are all of our inquiries best served by the same research methodology – the quantitative methodology of social science?" In the latest issue of the *Journal of Interior Design,* Paul Eshelman (2004) admits to a sense of "…smoldering tension between the creative/subjective and the rational/objective side of design … as if there are two separate and independent schools of thought vying for dominance, rather than two complimentary dimensions of the same process seeking balance" (p. v). The author of this proposal submits that this tension grows out of the fact that academic discourse in the field of interior design, particularly as it is presented at IDEC International Conferences and in the *Journal of Interior Design*, is structured in a way that favors the "objective" and quantitative research model of social science as opposed to qualitative "subjective" models of developing new knowledge and exploring various ways of "knowing" as exemplified in academic art and architectural discourse.

Process/Context

The tension described by Eshelman is experienced acutely when encountering, for example, the "Call for Abstracts" for the annual International Conference. Despite recent revisions to the process of submission, the fundamental bias toward social science methodology remains intact. The prescription of headings, for example, and the limitation of categories of submission to papers, panels and posters discourage alternative methods of inquiry. In addition, the Call now asserts, "…all categories will use the same set of instructions and require the same submission components." Finally, the use of APA guidelines as the formatting model for all submissions places further limitations on the expression and presentation of creative scholarship.

The constrictions that this "frame" imposes on research models become all too apparent when a comparison is drawn between them and the acceptable scholarship models offered by both the College Art Association (CAA, 2004) and the Association of Collegiate Schools of Architecture (ACSA, 2004). These two academic associations adhere to the blind peer-reviewed process of evaluation, but the formats allow for more speculative investigation and qualitative analysis.

Because a significant number of IDEC members hold advanced studio-based degrees from programs that define research in broader terms that encourage creative exploration and discovery, they perceive themselves to be at a decided disadvantage when seeking IDEC venues for their creative endeavors. While the annual Juried Exhibition does showcase creative activity,

it does not provide opportunity for critical discourse around that activity. The recent addition of the *e-Journal* holds promise, but its basic "frame" remains consistent with the print *JID*.

Summary

The author/moderator has invited four panel participants with different backgrounds and research agendas to grapple with this issue of the creative/subjective vs. the rational/objective. All four panelists and the moderator have had peer-reviewed work selected for presentation at IDEC conferences on a regular basis, and all four of the panel members have been published in the *JID*. The presentation of their individual research "narratives" may begin to suggest some new methodologies. At the very least a dialogue between creative scholarship and objective research may emerge.

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Bridge the Differences Between the Digital and the Traditional Media

Jiang Lu
Eastern Michigan University

Purpose

This paper examines the issues concerning the on-going debate between the advocates of traditional media and digital media, and tries to look at them from a perspective looking at the relations between the digital and the traditional media through the significant role played by a particular medium – the non-photorealistic rendering with Adobe Photoshop that may serve as a bridge between the emerging computer graphic technology and the design tradition.

Process

In design studios and digital media courses, the author taught the students a digital non-photorealistic rendering with Photoshop. In this approach, perspective views generated from a basic 3D computer model without lighting, materials, and details are used as base drawings. The AutoCAD hideline printouts of perspective views are traced by hand when details are added. The hand traced perspectives are re-digitized and artistically rendered in Photoshop. Students can transfer 2D or 3D file directly from CAD file to Photoshop file for rendering, too. Their works are carefully evaluated and compared with their works created with traditional media.

Summary of Results

The students can learn the Photoshop rendering techniques very quickly. The Photoshop process uses less time than creating perfect models and rendering completely in traditional CAD or VIZ render.

Students use this technique as a design tool in stead of a final presentation process. They take advantages of the computer media to enhance their design qualities. Students are really encouraged by the ease of control by using the Photoshop rendering technique. The process is all in real time unlike the lengthy times involved in CAD or VIZ rendering processes. Students felt that the whole process was similar to the traditional painting but they would never ruin the drawing as they would have done in water color or marker.

The most important contribution is that non-photorealistic renderings display student's personal characteristics and artistic styles. The common characteristics observed in renderings by the students are very soft, lively, and artistic.

In a comparison of students' works in both media, one important thing to notice is that the students who have better skills in traditional media create better Photoshop renderings.

The use of the non-photorealistic rendering with Photoshop challenges the criticism of digital media for being very rigid and showing only finished presentation. It shows that the non-photorealistic digital rendering as a hybrid medium is actually a medium between the extremes. Using such a medium, we can take advantage of the digital technology while enjoying individualized artistic creation. The correlation between the proficiency of students in both media shows that the artistic principles of the traditional media are equally important in digital media. On the other hand, the new possibilities that are created by the power of digital image

processing require us to rethink our way of doing illustrations and renderings. This may in turn require us to reinvent our traditional way of artistic training.

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Teaching C2C

Anna Marshall-Baker
University of North Carolina at Greensboro

Purpose

Interior design is faced with a persistent challenge regarding professional respect, and, consequently, how best to educate interior design students. Yet these concerns pale when compared to the challenge of being good stewards of the planet. Importantly, a response to the larger concern, global stewardship, also will address challenges to interior design education and practice. The purpose of this presentation is to describe two undergraduate studio projects that affect students' awareness and understanding of ecological design; thereby preparing them to carry into practice cutting-edge knowledge regarding the design of eco-friendly interiors.

Process

Cradle to Cradle: Remaking the Way We Make Things (McDonough & Braungart, 2002), articulates a message that extends beyond green design or sustainable design to espouse environmental responsibility and embrace a shift in the way human beings view their place in and their use of the world. Although the practice of cradle to cradle design primarily has been within business and industry (e.g., Hawken & McDonough, 1993), attention is now turning to education and the preparation of future designers to practice sustainable or ecological design.

Introducing cradle to cradle projects into studio forced faculty and students alike to become educated in this paradigm. All were learning from the conditions and questions in studio that arose from the literature, films, websites, and lecture. Students relied on these experiences to assist them in the design of a cradle to cradle neonatal intensive care unit during the spring, and of a single family residence during the fall semester. Each project presented unique challenges ranging from building codes to site analysis to specification of interior materials and finishes. Three helpful resources included a program to evaluate the eco-intelligence of materials (www.mbdc.com); key considerations and questions developed by GreenBlue for the design of sustainable products; and three lists used to view substances as harmful, "less bad," or safe to use (McDonough & Braungart, 2002).

Summary

As a consequence of these studio experiences, students understand the challenges of ecological design, and, importantly, are able to make informed decisions when the options are limited. In this way, students gain knowledge about cradle to cradle design, but also about the limitations associated with ecological design. This prepares them to move into practice armed with knowledge of safe or unsafe substances and poised to watch for materials and products that will provide viable alternatives to conventional thinking and practice. Thus, students will not only bring coveted knowledge into practice, they will join others with similar educational opportunities to become the generation of designers uniquely positioned to alter the perception of interior design as the profession known and valued for its practice of ecologically sound, healthy interior environments.

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Problem Solving for the "Real World":
An Enlightened Course of Action for Project Design

Donna Zimmerman
University of Wisconsin-Stevens Point

Purpose

As interior design educators it is our responsibility to create significant and meaningful learning experiences for our students to prepare them for the rigors of the professional field. For the senior design student, poised to make the transition from academia to the professional world, the final studio course is of critical importance. For that reason the thoughtful and creative design of the final thesis project is crucial.

The purpose of this presentation is to examine a studio-based model designed to foster connections between design professionals and students in a 4th year design studio. The presentation will describe a "real world" design project that requires students to utilize sustainable design applications; work throughout the semester in collaboration with an interpretive consultant who is part of the professional design team; and ultimately to present their final design solutions via video-conferencing to the architects and designers who are actually working on the project in a city thousands of miles away.

Descriptive analysis and assessment from five senior studio courses will be discussed. Questions posed about the process and findings will encourage audience participation in sharing their own experiences and insights concerning the development of final thesis projects.

Methodology

The "real world" project involves the design of a regional nature center in Jonesboro, Arkansas, a large-scale, multi-use facility, which opened its doors in August 2004. Students in the senior studio course worked in teams of 2 in collaboration with an interpretive consultant who was an active member of the design team that held the contract for the actual project. Students met with the consultant four times throughout the semester for critiques and feedback.

Student teams "acted" as interior designers for the ABC Architectural firm* responsible for the project. ABC architects and interior designers participated in the final critique and represented the jury during student presentations via video-conference from Jonesboro, Arkansas.

Prior to the video-conference, the firm was sent final presentation drawings for each of the student team's designs as well as a PowerPoint presentation with details of their designs for review. The ABC design team looked at each student project in detail before the video-conference so vital feedback and critique would be constructive.

On the scheduled day of final presentations, student teams "met" with the jury of ABC architects and designers via video-conference; an interesting experience for both the students and professionals.

Summary

A "real world" design experience, where students collaborate with professionals in the field before they graduate, is an excellent learning experience. It fosters a connection with professionals in the field that is critical for graduating seniors. Students also found the experience of a "real world" project allowed them to focus on client preferences rather than personal ones and to experience the challenges of working within real parameters that affect design creativity.

In today's technology based world, there are unique opportunities for collaboration and diverse methods that can be used to connect professional designers with emerging designers in the classroom.

* Architectural firm name has been changed so as not to reveal their identity.

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Strategies for Implementing Group Work and Teaming in Interior Design Education

Barbara G. Anderson
Peggy L. Honey
Migette L. Kaup
Julie Zuo
Kansas State University

Purpose

The purpose of this presentation is to share teaching strategies for group work and teaming within the interior design curriculum. The approaches presented have been developed through application and adaptation of methods described in the literature on cooperative learning in higher education and the design professions (i.e. Bento, 1997; Bronzino, Ahlgren, Chung, Mertens, & Palladino, 1994; Denton, 1997; Millis & Cottell, 1998; Russ & Dickinson, 1999; University of Oklahoma, 2002). The panelists are members of a faculty team from a single interior design program, thus their presentation will also address the strategic use of group work and teaming within the framework of an interior design curriculum. The panelists will outline diverse approaches and discuss the level of group work or teaming used, dependent on the desired outcomes for project requirements, as well as student learning outcomes at each level within the curriculum. Panelists will also discuss methods of forming, encouraging/directing, and evaluating teams that have evolved over several years.

Process/Context

Panelists will present cooperative learning strategies for four types of activities; 1) information collection in an early design studio at the beginning of a project, 2) production of construction documents, 3) a semester-long process in a final design studio with 19 interiors students and two architecture students that initially uses several groups to collect information and subsequently results in restructured teams to prepare schematic design solutions for a complex architectural and interior design problem, and 4) interdisciplinary teaming between interior design, architecture, and landscape architecture students to develop planning and design concepts for large scale projects.

Summary

Teamwork is often used in projects that are important to an organization's business success (GOAL/ QPC, 1995), and many businesses and corporate organizations rely on the diversity of perspectives that each of their employees brings to the problem solving process. Students should be prepared to interact with professionals who have different perspectives in a manner that encourages: 1) cooperative participation, 2) professional respect, 3) establishment of common goals, and 4) a successful solution to a design problem.

The approaches discussed through this panel presentation appear to reduce many of the concerns students hold for group work and teaming. They also produce high-quality cooperative learning experiences. This discussion of successful strategies for implementing teaming and group work in the interior design curriculum may result in a richer body of ideas for meeting the

critical need to prepare future interior designers to work effectively and confidently within groups and teams.

Our perception is that design faculty members, especially those with significant professional practice experience, are interested in teaching students to work well in teams and most find some way to incorporate teamwork into courses and student assignments. However, many design educators are wary about assigning cooperative learning projects because they lack practical and successful methods of 1) creating teams, 2) guiding and monitoring teamwork toward productive and positive learning experiences, and 3) evaluating team experiences and team products. For design educators who have attempted team work within their courses but found it an unsatisfactory experience personally or for their students, this panel presentation will offer successful methods of using group work and teaming in the interior design curriculum.

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Schema Theory in the Interior Design Studio

Lori Brunner
Iowa State University

Purpose

Gallini (1989) argues that, "the ability to combine a collection of problems into a meaningful representation, or schema facilitates learning" (p. 244). More specifically, Chan (1990) reports, "that the ability of organizing and applying schemata determines a designer's ability" (p. 78). The purpose of this study was to measure the impact and effectiveness of a conceptual advanced organizer, a database/analysis card model, in the interior design studio. The effectiveness characteristics were examined from four main areas of a design project: 1) organization of information, 2) categorization of information, 3) application of theory, and 4) overall design. The following research questions were addressed:

1. Do students, who use conceptual advanced organizers, develop design projects that are more organized than students who do not use such organizers?
2. Do students, who use conceptual advanced organizers, develop design projects that categorize information more effectively than students who do not use such organizers?
3. Do students, who use conceptual advanced organizers, develop design projects that are more theoretically-based than students who do not use such organizers?
4. Does the skill of organizing and applying schemata determine a designer's ability?

This study utilized and analyzed the strength and capabilities of the database structure, coupled with the spontaneity and idea generation of William Pena's analysis card technique (1977) in providing an expert-like structure for novice designers in their problem solving in the design studio.

Methodology

This study was an explanatory cause/effect longitudinal study involving two separate design projects in a freshmen interior design studio course. Three groups were established: 1) students using the analysis card organizer, 2) students using the database/analysis card organizer, and 3) a no-treatment control group, where students received the traditional studio instruction. Three separate measurement techniques were used to obtain student performance and preferences—the Design Review Panel evaluation instrument (DRP), content analysis of students' presentation boards, and the Student Cognitive Profile, which was administered after the end of Project 2. Descriptive statistical analyses, and ANOVA, Gamma, Linear and Multinomial Logistic Regression, and Paired Samples T Test analyses were conducted.

Summary of Results

Results indicated that the database group slightly outperformed the analysis card group and no treatment control group with respect to organization. However, the database organizer showed larger differences between the other two groups with respect to categorization and

theory. Specifically, the database organizer was a significant aid to theory application in comparison to the control group. However, the analysis card technique when compared to the control group, showed no significant improvement. Thus, while the analysis cards were helpful to the students in organizing and categorizing, it did not assist in theory application.

In conclusion, both the analysis card and the database design resources proved effective in helping the novice designer improve their organizing, categorizing, and theory application in the design studio. In addition, it was also shown that a well-organized, theoretically-based design solution does in fact help to determine the design solution success.

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Engaging in a Dialogue with History through Digital 3-D AutoCAD Models

Suining Ding
Indiana University Purdue University Fort Wayne

Purpose

While computer-based analysis, modeling, and computer aided design are widely used in the fields of architecture and interior design, few Roman architectural components have been developed and few authentic Roman architectural materials have been categorized into CAD libraries for Roman architecture education and research. Designers are seeking an effective way to create modern interior spaces to recapture the spirit of classical architecture. This need strongly supports the rationale of this study which is engaging a dialogue with history through the building of digital 3-D models. Generally, 3-D AutoCAD is taught in a traditional way, which means students follow a tutorial text book and learn the software. This study explores a new pedagogy of teaching 3-D AutoCAD. The purpose of this new teaching method is to let students not only learn digital 3-D model building, but also to reinforce their knowledge of Roman architecture. The other outcome of this study is to predict the future design by 3-D computer generated models which reflect the spirit of Roman architecture.

Process

Field Data Collection

To explore Roman architecture, a study trip to Rome, Italy was taken July 8 – July 22, 2004. Field data was collected in the form of digital pictures of Roman architecture and its components. Roman interior space, decorative materials, and the ruins of the Baths of Caracalla were studied intensively. In addition, freehand sketches and field measurements were recorded while teaching Roman architecture on site.

Render Library Development and Pre-Test

To categorize Roman architectural components and authentic materials into a CAD render library, digital images were imported into AutoCAD. The CAD render library was used to build a model of a portion of the Baths of Caracalla as a pre-test of this newly developed CAD render library.

Course Design and Students Projects

In the newly revised syllabus, the first project is to create a simple interior space which recaptures the spirit of Roman architecture while students are learning the basic 3D AutoCAD commands. The final project is to reconstruct a ruined house in Pompeii. The architectural components created in the previous class session are to be used in the final project. The authentic Roman architectural materials and finishes, as well as lighting design, are to be demonstrated and applied to the 3-D models.

Summary

This new approach to teaching AutoCAD should reinforce student's knowledge of Roman architecture, and let students learn the digital method to reconstruct ancient Roman buildings by using 3-D AutoCAD. Through the dialogue with history while using modern technology, students not only will develop skills of 3-D model building for both new design concepts and reconstruction of ancient Roman buildings, but also will be able to create the modern interior space which reflects the spirit of classical architecture. This new pedagogy will be used and expanded through the teaching process.

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Teaching the *Inside* Rapid Prototyping of the Inside: The advancement of a pedagogical process using *Rapid Prototyping and Digital Milling*

Henry Hildebrandt
University of Cincinnati

Issue

Miniature room models by Mrs. James Ward Thorne in the Art Institute of Chicago show how wonderfully crafted period interior models exhibit minute detail and accurately scaled period furniture. They demonstrate how scale, texture, lighting, and color can effectively communicate the full scope of interior qualities. Three-dimensional models gives a clear sense of volumetric dimension, scale, and spatial sequence, but unlike Thorne's today models are built as abstract studies in white formcore with color, texture, and materials on material boards or in renderings. A new method of 3D model construction based on 3D rapid prototyping in product design using digital technology and enhanced software for digital modeling tool paths have expanded the opportunities for interior modeling beyond standard static orthographic CAD programs. These new rapid prototyping technologies also provide opportunity to further design teaching and the process of the translation the mental image to a physical model.

Methodology

Three technologies the CNC milling modeler, FDM /ABS plastic modeler, and the newest 3D printer, translate the pictorial image through an output tool path to produce a physical 3D model. This paper describes the process of rapid prototyping model methodology in design studio teaching.

Introducing Rapid Prototyping

CNC milling (computer numeric control) uses a three- or five-axis high-speed milling machine in a removal process to cut shapes and forms from a digital model or database. Used in many industrial applications, the CNC milling process involves cutting models from a solid block base material, often a type of foam such as Styrofoam. Design software files must be prepared in blocks before transferring to the IEGS or STL files used by the modeler. The FDM (fussed deposition modeler) and 3D printer build the model by depositing thin, precise layers of resins in rapid secession to build their forms. The FDM modeler works with ABS plastic while the 3D printer utilizes a type of gypsum plaster dust layered .0004 of an inch thick and bonded together and stabilized with a binding agent applied by a printer head.

Process

For exploring new digital technologies and digital tool paths for rapid prototyping in design studio, the assignment sequence was organized to first engage detailed and small-scaled components of the interior. A door handle, a light fixture, and a conference table were assigned in progressive order, and then were required to be incorporated into a more complex program of the design for a conference room devoted to international peace negotiations and supporting requirements (entry / exit, lighting, shell structure, etc.). The assignment sequence was

structured to move from the most intimate and direct component – door handle – to the more complex and layered – the negotiation space.

Summary

Investment of time and effort is shorten in the feedback loop of further idea generation and the transfer of mental images to tangible communication by using digital and rapid prototyping modeling and provided a fast and effective iterative / evaluation cycle. Digital processes over traditional design development means does not insure better design proposals, but allows a more flexible iterative design process and fluid feedback loop. The designer or student must still invest considerable effort in setting up the digital image(s) (regardless of software choice) and must make critical decisions and judgments along with creative abilities.

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Drawing from Life and Drawing from the Mind: Making Connections between Fine Art Drawing and Interior Design Rendering

Mark Nelson
University of Wisconsin - Madison

Purpose

This presentation seeks to explore the relationship between fine art drawing as taught in an art foundation course and in an interior design rendering course. Students often take both types of courses in a FIDER-approved curriculum. The author's objective is to propose ways to make connections between the two types of drawing by identifying divergent ideologies and goals implicit in fine art drawing and rendering.

Process/Context

The process consists of three steps. The first step is a search for possible explanations of low correlation between fine art drawing skills and rendering skills. The second step is to examine ways that fine art drawing both differs from and is similar to rendering. This includes comparing the focus of a selection of fine art drawing texts with the focus of a selection of rendering texts, as well as a discussion of the different materials and techniques used in fine art drawing and rendering. The third step is to discuss exercises, techniques and outcomes used in sketching and rendering class as ways to help students make connections between fine art drawing and rendering.

Summary

In the first step, discussion begins with the observation that student portfolios sometimes show a low correlation between strong portfolio images in fine art drawing and strong portfolio images in rendering. Sometimes, images from an earlier fine art drawing course demonstrate greater skill than those from a later rendering course. This implies that students do not always make connections between the two types of drawing in a way that allows them to build on previously learned skills. A literature review suggests that making connections can lead to better rendering skills as well as better design skills. Other articles discuss the benefits of developing both technical and creative abilities, the need for addressing the needs of students with different learning styles and the need to study and analyze the behavior of lighting and materials in interior environments.

In the second step, a comparison of textbooks for fine art drawing with textbooks for rendering points to reasons why students may have difficulty making a connection between the two types of drawing. In fine art drawing, one of the main goals is to study nature and draw from observation. In rendering, one of the main goals is to explain a design that exists only in the mind. Fine art drawing relies heavily on charcoal, facilitating tonal drawing with lower levels of detail, while rendering relies heavily on ink or pencil, facilitating contour drawing and higher detail.

In the third step, student exercises offer ways to create connections between fine art drawing and rendering. Exercises that seem to work well involve mixing fine art drawing materials and techniques with rendering materials and techniques.

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Teaching Cradle to Cradle Design through a Science-based Case Study Approach

Huantian Cao
Lisa M. Vogel
Haejin Gam
Cheryl A. Farr
Oklahoma State University

Purpose

Designers, as the principal determinants or creators of a product, play critical roles in minimizing environmental problems (Mackenzie, 1997). This poster will present an NSF-funded course development project that emphasizes the scientific concepts underlying environmental problems. Using a case study approach, this course focuses on McDonough and Braungart's "cradle to cradle" design model as a method for eliminating environmental problems during the design phase of a product's life cycle, thus teaching students about the role they play in designing and specifying environmentally responsible products.

Methodology

Today's environment-concerned designers often ask manufacturers to define and explain the contents of the materials they plan to use. Usually these questionnaires are returned saying, in essence, "It's proprietary. It's legal. Go away" (McDonough & Braungart, 2002). Because designers usually lack extensive scientific knowledge from their college coursework, they often have to rely on insufficient and ambiguous manufacturers' information when working in industry. This newly developed course teaches interior and apparel design and merchandising students the scientific concepts underlying the environmental problems of textiles and plastics, the most commonly used materials in interior and apparel products, and encourages critical thinking by these students. By understanding these scientific concepts and knowing how to apply them, designers and merchandisers will have the knowledge to select materials that are not harmful to the environment.

Traditional manufacturing is a one-way "cradle to grave" model that does not consider the materials after use and creates a large amount of waste and pollution. McDonough and Braungart introduced the "cradle to cradle" model in which products can be designed from the onset so that, after their useful lives, they will provide nourishment for something new. They can be conceived as "biological nutrients" that will easily reenter the water or soil without depositing synthetic materials and toxins. They can also be "technical nutrients" that will continuously circulate as pure and valuable materials within "closed-loop" industrial cycles, rather than being "downcycled" into lower-grade materials (McDonough & Braungart, 2002, McDonough et al., 2003). This "cradle to cradle" model provides designers with a new way to design products and eliminate many environmental problems at the very beginning of the product life cycle—during the design phase. This poster will present the how several prominent companies have successfully applied "cradle to cradle" to their design process. Digital video, used in the course to present case study data to students, will be shown during the poster presentation. The presentation will include interviews with Dr. Michael Braungart, and persons

from companies such as The Moderns, Shaw, Herman Miller, and Honeywell Nylon, regarding their application of "cradle to cradle" in design.

Summary

By increasing student knowledge of the scientific concepts underlying the "cradle to cradle" design model, students will be able to better choose environmentally responsible and appropriate materials. Through this course, they will have the background to communicate more effectively with manufacturers regarding the elements included in interior and apparel products. This poster will provide information about the NSF grant which funded the course development and will present the video data that was collected from industry leaders in this area.

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Is Sustainable/Green Design Taught in FIDER Accredited Interior Design Programs?

Kathleen R. Kunkle-Tomasewski
Louise Jones, ArchD
Eastern Michigan University

Purpose

In step with the move by the interior design industry towards sustainable/green (S/G) design, FIDER professional standards for accreditation now include sustainable/green criteria. "Students should demonstrate an understanding of the concept of sustainable resources" (FIDER, 2002, p II 14).

The purpose of this research project was to determine if and how FIDER accredited programs in the United States are incorporating sustainable/green design into the curricula. Are S/G courses required? Is sustainable/green design information being integrated into courses not focused specifically on S/G design? Are FIDER accredited programs located in one region of the United States more likely to offer an S/G design course than programs located in other regions? Are FIDER accredited programs in publicly funded universities more likely to offer a S/G course than privately funded universities? Are FIDER accredited programs that offer multiple interior design degrees more likely to offer an S/G design course than those that offer only one degree? Do interior design programs that require S/G design courses have a greater number of credit hours required for graduation than those that do not?

Method

Content analysis was used to collect data regarding the curricula of FIDER accredited programs. The study population was all FIDER accredited interior design programs in the United States, identified using the FIDER webpage. The total population of 118 programs was canvassed; 116 programs provided information (response rate = 98%). After review of the programs' web pages, program administrators were contacted by email or telephone. Printed program materials, including course descriptions, were requested. The data was entered into a matrix that was divided by regions in the United States, interior design degrees offered at the university, university's funding source, S/G design course requirement, and S/G design integrated into course(s). Qualitative and quantitative data analysis was used to summarize the data and to draw comparisons among FIDER accredited programs in the United States.

Summary of Results

The typical FIDER accredited interior design program in the US (as depicted by mode): was publicly funded (75 of 116; 65%); offered only a bachelors degree (72 of 116; 62%); required 120-125 credits for graduation (48 of 114; 42%); was in the Southern region (40 of 116; 34%); and did not offer a S/G course(s) (93 of 116; 80%).

The typical program that included S/G information was privately funded, offered only a bachelor's degree, and required 120-125 credits for graduation. Fewer than one-fourth (n = 23, 20%) of the programs offered an S/G design course. However, FIDER doesn't state that an S/G design course is required, but instead that S/G information must be addressed. Therefore, it is

disturbing that only 34% (n = 39) of the FIDER accredited programs either offered an S/G design course or integrated it into other courses, as indicated by the inclusion of S/G information in course descriptions. Perhaps the outcome of this research project will serve as a catalyst for change, such that design decisions reflect recognition of the necessity to view all options through a sustainable/green design filter.

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Simulations: Understanding How Design Choices are Perceived by the Aging Eye

Dana M. Moody
Andrea McClain
University of Tennessee at Chattanooga

Purpose

The normal human eye changes as it ages affecting a person's perception of color, texture and depth perception (Aging & Vision…, 1996). As the aging population drastically increases in number, interior designers face the challenge to redesign the built environment while taking into account these special needs (Null & Cherry, 1998). This will require designers to consider daily activities, normal changes that a person goes through as they age, and how to incorporate flexible solutions that enable a person to perform those activities.

The objective of this study is to explore how the use of eye simulation tools changes the interior designers' awareness towards interior needs associated with the aging eye. Traditional teaching methods limit the designer's ability to communicate an accurate mental image of the appropriate solution. Visual inaccuracies may lead to designs that endanger the safety of the intended user (Ankerson, 2000). Through the use of simulation glasses, designers will gain an understanding of how their application of interior finishes and lighting affects the health, safety and welfare of the aging population.

Methodology

After conducting a literature review for background information, a preliminary study took place using simulation glasses that best replicated the normal aging process. Fabrics most affected by the perception change were gathered to assist with further research. A local American Society of Interior Designers (ASID) meeting was the vehicle for the initial testing of the aging simulation glasses. ASID members were first introduced to yellowing simulation glasses. With the glasses on, the subjects became familiar with their environment and with fabric chosen in the preliminary study, taking note of color and lighting changes. The subjects were then introduced to the low contrast simulation glasses to explored color, texture and depth perception changes in the surrounding environment and with the demonstration fabrics. After removing the glasses the subjects were ask to note the differences in their perceptions. This information was gathered through the use of a survey.

Summary of Results

Utilization of simulation glasses proved to be a successful tool in increasing awareness and knowledge of the perception changes associated with the aging eye. While wearing the yellowing simulation glasses, participants experienced increased glare and noted a decrease in ability to adapt to light-to-dark changes. The participants also lost the capability to discriminate cool colors, and similar values. The subjects expressed the inability to discern fine details and textures while wearing the low contrast simulation glasses. Depth perception was also impaired. After participating in this study, 95.5% of the subjects remarked that their approach to color and lighting application would change. Utilization of simulation equipment with students early in

their design program has the potential to create habits that will aid in their quest to become contributing professional designers and will increase their ability to protect the health, safety and welfare of all populations.

Presentation

The poster presentation will allow the viewer to gain in-depth understanding of the significance, methodology and findings of the study, both visually and through printed text. It will also be interactive, allowing the viewer to experience the simulation glasses used in the study.

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G. Center
A Sustainable Mobile Training Center

Haroon Sattar
University of Arkansas

Issue

In response to the advancement of technology and challenges, the needs and requirements of the work place are also changing. Architecture and interior spaces being physical part of this changing environment it needs to be changeable, extendable both in space and time. However this changing space and work place needs a base and stable infrastructure.

This project attempts to explore the possibilities of a flexible, changeable mobile environment, based on a very successful mass transportation system - the highway network and container truck transportation system.

Process

The project is inspired by mobile portable environments. The traditional nomadic, tribal mobile societies and their architecture were essentially eco-friendly. This inspired the combination of mobile and sustainable issues into one project. The development of massive transportation systems based on highway network and truck trailers has become universal. Using the standard universal container unit as the basic modular unit of this project a smaller container unit is designed as a dwelling/work place unit. Larger container unit is designed as a work/office unit and also as work cum dwelling unit. To make them function efficiently and comfortably the units are expandable with built in flexible and expandable furniture.

These modular units can be arranged in various combinations, such as linear, parallel, square or cluster arrangements, creating possibilities for a wide range of site and functional requirements. The flexibility of space and function can be attained within each unit as well as in combination of arrangements.

Mobility is achieved by selecting the containers as the modular unit of the design solution. The units can be transported on trucks, train or even shipped overseas. Among many possibilities the units are designed to work as a training center for creating awareness, promoting sustainable environments through exhibition and display of sustainable architecture, materials and spaces.

Summary

The design objectives of mobile transportable environment are to develop an adaptable flexible structure that is responsive to its immediate and changing environment and blend with different site conditions. The mobile unit provides infrastructure and event facilities for multi-day indoor-outdoor events and meets the functional requirements of a wide range of users and target groups. Even though mobile, these can be high performance interior spaces with efficient engineering solutions.

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eManage / eMagine Your Curriculum from One Location

Olivia Snyder
Indiana University

Purpose

Organizing all course documents in a central server demonstrates how technology can be utilized to support and enhance student learning. An entire curriculum can be stored and disseminated utilizing a central server. This system can manage all courses in the curriculum, including studio and lecture formats, distributed from a local campus or through distance learning.

Security, storage limits, and the difficulties of team projects are limitations with these many file management tools. In contrast, the Central Server System, presented here, has been in development and tested for five years at a four-year FIDER-accredited program and overcomes many limitations of other file management systems. This system is easy for students to navigate and for faculty to utilize, requiring little training and minor maintenance.

Methodology

The advantages of organizing course materials on a central server allows for several unique aspects of course and program management. The advantages include large file storage, central location for project resources, the opportunity for secure team collaboration, ease in disseminating information, ease in review and response time, archival capabilities for enhanced teaching, and documentation storage for accreditation reviews. The system works using varied levels of access/permissions so that students and faculty can have protected areas on the same server.

The key factors in developing a central server system include security, organization, and archiving. Security refers to two basic concepts: who has access to the files and how much access do they have. When determining who will have permission, it is helpful to organize the various people into *user groups*. When determining how much access a user group should have, the permission breaks down into those who can *modify* a file (write, correct, and save the file) and those who can only *read* the file. These two levels of permissions—who and how much—are applied to every level of organization within the central server system.

The following categories could be used to *organize* different levels within the central server: course files, resources for all students, resources for instructors, individual student storage, and archived files. *Course files* are organized by course, and could be subdivided by semester, week, or unit. *Resources for students* can be a collection point for resources that are needed repeatedly throughout the curriculum, for example, a copy of the American with Disabilities Act. *Resources for instructors* provide a method for sharing instructional tools that can be applied to several courses, such as a syllabus or grade sheet template. *Individual student storage* allows storage space for each student. Here the permission is restricted so that only the student can have access to their work, protecting it from others.

Summary of Results

The system described has been in development and tested for five years at a four-year FIDER-accredited program. As a teaching *and* learning tool, the Central Server System has developed into an extremely useful tool. Feedback from instructors and students is highly positive. The server has become a model for providing technical support to other programs within the institution's academic units.

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Although no formal references are cited, five years of anecdotal data has been collected and utilized to enhance the performance of this methodology.

Teaching Creative and Appropriate Selection of Materials

Olivia Snyder
Indiana University

Cathy Stieg
Cornish College of the Arts

Purpose

To provide a framework to make the selection of materials in the practice of interior design an integral part of the design process, not an afterthought. Designers need not only to be knowledgeable of the characteristics and appropriateness of the materials they use, but also to be inspired by them. The focus of the framework will be the development of a thorough understanding of the characteristics and qualities of various materials used in the interior environment as a basis for creative and appropriate application and specification of materials by interior designers.

Methodology

Many texts and curricula approach materials in the interior environment as a surface treatment, to be applied after the initial design of the space, and organize the information accordingly: by *application* and not by material. This is a fundamental flaw in the approach to the study of materials, which limits the comprehension and creativity of the student and design professional. The relationships between materials and principles of aesthetics, architectural context, cultural significance, environmental impact and social responsibility can and should be presented by *type of material* rather than by application.

The presentation of materials for the interior environment as surface decoration, and organization of information by application (i.e., floors, walls, ceilings) diminishes the potential uses of these materials. This approach also limits the student's understanding of the inherent qualities, physical properties and cultural significance of materials, discouraging the creative use of materials. By focusing on the characteristics of materials themselves, students gain a better understanding of the role materials play in the design process. This approach provides students with the skills to research and evaluate materials for *creative and appropriate* use in the interior environment.

The organization of the framework supports a very effective curriculum on materials for interior design. It builds on basic principles of the integration of materials in the design process, stresses the importance of understanding the characteristics of materials – physical, aesthetic, environmental, and economic - and develops skills in researching and evaluating materials for interior applications. The framework is not perceived as a menu for surface decoration, but as a source for inspiration, for respect for materials, and for the technical and professional data necessary to practice interior design.

Summary

The authors propose a simple mechanism for exploring materials. Classroom experiences, professional practice, and extensive interviews with industry professionals contribute to the sound knowledge base of using this methodology of presenting materials in the undergraduate environment.

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The Role of Interior Design in a Fortress World

Katherine Warsco, Ph.D.
Patricia F. Lindsey, Ph.D.
East Carolina University

Purpose

Since the bombing of the World Trade Center and the Pentagon, shoring up homeland defenses has dominated the minds of the American public (Romesh, 2002). The culture is suffused with incitements to anxiety as the media focuses on the imminence of terror in the environments that we inhabit (Sorkin, 2003). The purpose of this presentation is to explore changes in interior design practice and education resulting from recent events that have shifted public perception away from the current market world to an emerging fortress world (Hammond, 1998).

Process/Content

One mission of interior design education is to prepare our graduates for careers that will serve the interior design profession. At East Carolina University, the Department of Interior Design and Merchandising worked with an outside consultant to explore global trends. Based on methods for creating futuristic scenarios this group outlined what the world of interior design practice and education might look like in the next ten years. Such anticipatory thinking is the process of using environmental scanning and what-if scenarios to anticipate future conditions.

Environmental Scanning

The process of environmental scanning was applied to search for evidence of linkages between a fortress world view and possible roles for interior design practice and education. These interrelationships were gleaned from trends analysis and marketing consultancy, perusal of daily news media, synthesis of addresses by keynote speakers at futurist's conferences, review of literature in the design trade magazines and anecdotal accounts by practicing interior designers.

Building a Scenario

A scenario is a rough picture, in this case based on emerging trends of how the world will look in ten or more years. The process of scenario analysis is most useful when guided by a specific set of questions. Interior design is a profession whose mission is to promote the health and safety of building occupants. The knowledge, skills, and core values of interior design can contribute to a dialogue on the need to balance security and openness and to address an increasing need to deal with the personalization of fear that has permeated the American way of life.

Summary

The scenario process revealed two major categories of responses to the threat of violence in the U.S. Material fortifications are physical solutions, reliant upon engineering and architectural applications of science and technology for the mitigation of crime and violence.

Immaterial fortifications are more internal and revolve around modifications to behavior (Sorkin, 2003). These fortifications are coping responses to mental anxiety triggered by perceived threats to violence that are increasingly pervasive to our daily routines. Environmental scanning with respect to a fortress worldview suggests the need for security through interior design is as much a response to mental anguish as it is a preventive and proactive approach to safeguarding building occupants from physical attack. An increasing concern for safety and security issues has implications for the design of interiors and the value of interior design for addressing deep seated human needs.

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