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interior design education

ABSTRACTS: Papers
Presentations
Posters

INTERIOR DESIGN EDUCATORS COUNCIL
2000 CONFERENCE
March 29 - April 1, 2000

WESTIN HOTEL - CALGARY, ALBERTA, CANADA
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Interior Design Educators Council
INTERNATIONAL CONFERENCE ABSTRACTS

IDEC 2000 Conference
March 29 - April 1, 2000
Calgary, Alberta, Canada

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The Review Process

Abstracts included in this document were selected through a review process for determining presentations to be given at the 2000 Interior Design Educators Council International Conference, March 29-April 1, 2000 in Calgary, Alberta, Canada. Proposals were submitted for one of three categories: paper, presentation, or poster. All proposals included an abstract. Proposals for papers and presentations also included a 1,500 word narrative to guarantee that the panel of reviewers had as complete an understanding as possible of the abstracts in those two categories.

Each submittal was evaluated by two reviewers. In cases where scores varied, a third reviewer was added. Number of submittals accepted was dependent upon quality as determined by the resulting rank order and time available during the conference. Out of 83 proposals submitted, 61 were accepted for presentation at the conference and invited to be included in this publication.

Reviewers, under the direction of Stephanie Watson, Conference Abstract Review Coordinator, University of Minnesota, and Jane Kucko, Texas Christian University, included:

* Karen Doyle, Dakota County Technical College
* Theodore Drab, University of Oklahoma
* Betsy Gabb, University of Nebraska - Lincoln
* Dee Ginthner, University of Minnesota
* Denise Guerin, University of Minnesota
* Bridget May, Marymount University
* Andrew Vasilevich, Ryerson Polytechnic University

Definitions of entry categories, adapted from the CALL FOR ABSTRACTS

Paper:

A paper is characteristically formal in structure and format. The author(s) develop and deliver a paper based on substantiated theories or studies from which findings are presented that provide insight into a topic for advancing the body of knowledge and the profession. A paper is based on well-developed inquiry about interior design theories, methods, process, teaching issues, practice issues, etc. The audience provides the author(s) with critique and feedback that may lead the author(s) to reflective thinking on the issue or refinement of the work. If a topic is fully developed, with suitable background and systematic inquiry, then a paper is the appropriate submission category.
Presentation:

A presentation is intended to be less formal than a paper and structured so that dialogue occurs. The goal is to stimulate discussion on a relevant topic of interior design in teaching, method/process, theory, practice, etc. The topic background is developed to provide direction for interactive dialogue. Audience exchange stimulates creative thinking and reflection by all participants so that the author(s) can advance the idea. If an idea is a new topic, an exploratory idea, an application, or experiential in nature, a presentation is the appropriate submission category.

Poster:

A poster is intended to foster one-on-one exchange between members, offer experiential interaction, and provide visual images that can be viewed independently. A visual display is designed to express an idea or track a process relevant to interior design topics in teaching, method/process, theory, practice, etc. The audience comments, questions, or seeks instruction about the content or interpretation of the topic so that the author(s) can advance the idea or further apply the process. Posters are allotted floor and table space of approximately 30" x 60" and are presented concurrently with other posters.
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Papers and Presentations
IN SEARCH OF INSPIRATION: DEVELOPING DESIGN THROUGH LITERATURE, HISTORY, FILM, ART, ARCHITECTURAL PRECEDENTS, AND PERSONALITY THEORY

Carl Matthew
Betsy Gabb
University of Nebraska-Lincoln

Intent/Purpose
Emphasis on design processes in the development of problem solving skills is the focus of first semester third year studio. This studio, focusing on residential design, is the first semester of a four studio sequence. In addition to the course objectives established by the program curriculum, one objective of the studio instructors was to eliminate preconceived notions of residential design as simply interior decoration by focusing on application of theory, creative inspiration, and ordering principles.

Drawing from a range of influences, students developed and articulated design concepts in the development of design solutions. Inspiration was derived from readings of literature, historical research, viewings of film and art, study of architectural precedents, and understanding of personality theory.

Justification/Relevance
In the recent Carnegie Report entitled Building Community: A New Future for Architectural Education and Practice (1996), Boyer, the author of the report, recommends that "In a rapidly changing world, students need to look beyond the confines of a single discipline.... students should be exposed to how the great figures in history, literature, philosophy, and art have struggled with life’s moral dilemmas. These are the needs that make a true liberal education so essential "(p.77).

The studio responded to these needs, the need expressed by practitioners for students with critical thinking abilities, and the emphasis on critical thinking in the academy. Course structure and projects encouraged diversity of thought and the value of analyzing work from related creative fields as well as achieving a deeper understanding and appreciation for historical context.

Process and Methodology
Three projects were assigned during the semester. The first, to design a personal living space, melded information from the student's personality profile, space usage journal, and architectural precedents. The second, to design living spaces for three generations of women, used inspiration from literature, film and visual culture to provide the portraits of the clients. The third, to design a historically accurate display of a medieval or neoclassic interior, was based on research conducted in the History of Interiors course. All explorative and educational experiences were directly related to the completion of each project.

Results and Implications
The results of the semester's efforts included the following:
• A wider range of design solutions were developed.
• Students exhibited a greater understanding of conceptual development leading to a deeper level of discussion in the conceptual process.
• Students probed deeply into the issues of ageism, sexism, and gender.
• Students gained a greater understanding of the creative process by other artists and learned to see literature and film on a different level.
• Projects integrated work from their design history class leading to presentations at the university's undergraduate research conference.
Students experienced significant personal growth as individuals and team members evidenced as they went further afield for internships and have taken a more active role in the activities of the college reflecting their eagerness to reshape the profession.

References


CREATIVITY AND CONCEPT-BASED DESIGN: A SYSTEM FOR LEARNING

Katharine E. Leigh, IIDA, IDEC, Associate AIA
The University of Oklahoma

Purpose: Education and Practice
Design education has taken a hit or miss approach to developing strategies that integrate creativity in professional preparation; rather, the presence of creativity is casual. Methodologies are required which respond to the needs posed by design students and young designers to access strategies that stimulate creative responses in problem-solving.

Methodology

The problem solving task in initial planning occurs in making the transition from the analytical, pre-design phase of the project to the creative, design solution phase.” Creative design requires a leap of faith, but more importantly a set of tools to guide designers in their problem-solving capabilities. Design tools available for analytical thinking address information concerning space types, building efficiencies, circulation requirements, frequency of use and functional adjacencies. They are widely understood and used in practice and design education. Tools to promote the development of creative thinking are limited; primarily focusing broadly on stimulating one’s thinking, and have not reinforced the concept in the solution and have not been reproducible by others (Cavataio, 1999; Bagnall, 1991; Adams, 1987). Space, which might be described, as “warm, happy, futuristic, somber….”, encompasses characteristics that must be translated into planning. The strategy proposed utilizes the development of a concept to guide design decision-making using two methodologies to refine and strengthen the conceptual framework - word analogies and concept squares.

Word Analogies. The word analogy exercise generates an expanded conceptual vocabulary by requiring the student/designer to research dimensions of their project idea through language. A concept might be phrased as a metaphor, (the hall is like a garden passage), a short phrase (contemporary edge) or a string of words which clearly conveys an emotive idea (warm and sunny). Beyond the first 30 words the search for meaningful language begins as the students strives to identify 50 words. Then a decision is made regarding the strongest language descriptors using a simple evaluation.

Concept Squares. The concept squares exercise generates 3” x 3” diagrams (Figure 2.) Students select word pairs that explore diverse dimensions of the concept and develop two-dimensional explorations of their concept using specific word pairs to stimulate thinking. Students seek out and explore concept dimensions, drawing 30-40 images for their best three concepts. Conceptual clarity is achieved, as students discard ideas that are weak or less understood by peers. When used in early design learning experiences, the relationship between the design elements and principles can be specifically drawn by using the various elements and principles to change or alter the concept.

Summary of Results

Interior designers must understand the creative process and its relationship to frameworks for conceptual design in order to engage in acknowledged processes to benefit the profession. Designers need tools to understand the conceptual development process and its subsequent relationship to creative potential in the built environment. The methodology presented here provides a first step in documenting aesthetic tools necessary to balance the functionality of diagrams, matrices and blocking plans in considering creative solutions to spatial problems.
References


WORLDS OF NATURE AND SPIRIT:
THE INTERSECTION OF CULTURE AND INTERIOR DESIGN

Marilyn A. Read, Ph.D.
Auburn University

Purpose

Influences on Asian design and Latin American design are explored based on the intersection of spirituality and nature with human factors, family dynamics, religion/spirituality, geographic considerations, and socio-economic factors. The purpose of this presentation is to describe a method of teaching residential design by integrating a specific cultural perspective with application of basic space planning principles. The intent of this framework is to broaden and deepen the interior design student’s understanding of diverse cultures. The framework also identifies methods of evaluating regional and chronological characteristics of Asian and Latin American design.

Methodology

The residential design course focused on one cultural perspective (i.e., Asian or Latin American) for the term project. Asian countries included in the project guidelines were China, Indonesia, Japan, Korea, and Thailand. Latin American countries included in the project guidelines were Argentina, Brazil, Cuba, Mexico, Puerto Rico, and Venezuela. Nature and spirituality are primary concepts that inform design-related outcomes across these countries. 

A Pattern Language (Alexander, Silverstein, Ishikawa, Angel, & Fiksdahl-King, 1977), The Timeless Way of Building (Alexander, 1979), Patterns That Connect: Social Symbolism in Ancient & Tribal Art (Schuster & Carpenter, 1996), and House as a Mirror of Self (Cooper Marcus, 1995) were valuable resources used for lecture material that enhanced and reinforced students’ research material. As well, guest speakers contributed valuable expertise about particular concepts within the countries.

Summary of Results

Based on extensive research of specific countries, students identified specific design characteristics associated with human factors (e.g., scale of home), family dynamics (e.g., gender separation, intergenerational families), religion/spirituality (e.g., Buddhism, Native American spirituality), geographic considerations (e.g., site orientation, elevation, climate), and socio-economic factors (e.g., hierarchy of occupations, population density). The final design project required development of a program, design concept, floor plans, elevations, renderings, and material/furnishings boards for presentation during a ten-week term.

References


BEYOND STRUCTURE: CREATING A SENSE OF SACREDNESS THROUGH FORMS, SYMBOLS, AND SHAPES

Stephanie A. Watson
University of Minnesota

Jane K. Kucko
Texas Christian University

Purpose

The purpose of this presentation is to analyze how structures designed by Fay Jones become invested with sacredness. This presentation will address Thorn crown and Cooper Chapel simultaneously, focusing on the forms, symbols, and shapes that compose the interior design and architecture of a sacred place.

Methodology

Review of literature on sacredness established the theoretical framework. Other strategies performed in this investigation included interviewing, on-site studies, and photographic examination.

Summary of Results

There are three design lessons that we can learn from Fay Jones. Establishing a building/site relationship is the first lesson. The building should have some sense of belonging where it is; a sense of character of the place and features of the site (Gieringer, 1998). Furthering the building/site relationship, the profundity of a person’s experience of a sacred site may be significantly increased by having what Gray (1999) calls a “multi-mode” approach to the site. As demonstrated by Jones, both Thorn crown and Mildred B. Cooper Chapels hug the landscape, integrating themselves with hills and forest. The rustling of leaves, fresh aroma of air and wood, and light infiltrating through the trees, provides a multi-mode approach that subconsciously prepares the individual for spiritual experience. Both chapels utilize a walk with nature as a powerful means to present the architectural wonders.

The second lesson from Jones is the importance of relating the part to the whole. Fay Jones utilizes mathematical harmony and proportion as primary tools in his designs. Jones believes there should be something of the small things in the big thing and something of the big thing in the small things (Gieringer, 1998). For example, a cross motif appears in the metal bar stock supporting the pews, in lanterns lining the walls, and in the chapel’s cross - a slender metal stake positioned outside the transparent altar wall. In both chapels, ornamental motifs are employed as formal manifestations of underlying structural or function necessity. This blending of decorative elements into the structure is defined as “the interrelationship of each part to the whole”.

Equally important is the utilization of repetition. Jones believes that repetition of pieces based on mathematical models establishes rhythm. Repetition of lines found in the structures occurs in specialty elements such as windows, light fixtures, decorative elements on pews, and hardware for cabinetry.

The third lesson that can be learned through Jones is staying true to the nature of materials. Maintaining the integrity of materials throughout construction and in decorative forms establishes truth to a structure (Smart, 1989). Structures and interiors designed by Jones embrace integrity. Natural materials are emphasized and utilized in their purest form. Not only are materials used in an honest way, subsequent materials such as upholstery and metal finishes are subtly integrated and compliment the natural building components.

Fay Jones is a master of representing sacred structures. Thorn crown and Cooper Chapels are legendary landmarks that will fulfill Jones’ dream of outlasting himself. The structural
poetry imagined by Jones through his many years as a designer and teacher can be seen not only in Arkansas, but also around the country.

References:


PERCEPTIONS OF RELEVANCE CONCERNING THE INHERENT HUMAN NEED FOR NATURE IN THE DESIGN OF BUILT ENVIRONMENTS

Julie Stewart-Pollack
Rocky Mountain College of Art & Design

Purpose

We live in a time in which our rapidly growing human population requires that we continuously expand the built environment to meet our increasing material needs resulting in the escalating loss of natural environments. Design professionals charged with creating this built world face increasing challenges to design safe, functional, ecologically responsible, and aesthetically pleasing environments.

A growing body of knowledge is emerging in diverse scientific fields questioning the ability of our built environments to provide for many of the deeper, genetically based needs we may have of our surroundings - needs formed during our evolution in the natural world. These theories suggest that human beings may have an inherent need to experience and affiliate with the natural world in order to achieve and maintain optimum physical and emotional health, well-being, and physical and cognitive development (Wilson & Kellert, 1993). Related theories articulated by Kaplan & Kaplan (1989) and tested by Scott (1992, 1993) suggest that preference for certain characteristics of environments such as complexity and mystery may be related to this inherent human need for nature.

This information may have implications for the interior design discipline. If we need to experience and affiliate with nature to realize our full physical, emotional, and cognitive potential, what happens to us when we live - by choice, by necessity, or by force - almost exclusively in artificial environments where intimate interaction with nature is not possible?

The purpose of this presentation is to discuss design practitioners’ perceptions of relevance concerning scientific theories suggesting that human beings may have an inherent need to experience and affiliate with nature in the design of interior environments.

Methodology

A qualitative research method known as phenomenology was utilized for this study. The study consisted of three focus groups of professional members of ASID in one region. Participants were chosen for their leadership, visibility, and professional status within the interior design community.

Key questions centered around perceptions of how the inherent human need for nature may affect what people need from built environments, how this need might affect practitioners’ approach to their designs, and what types of information practitioners would need to be able to integrate these theories into their design processes.

Summary of Results

Participants indicated they were very aware, on an intuitive level, of the human need for nature but were unaware of any scientific research seeking to prove its existence. They were very interested in this research, viewing it as a way to help substantiate and increase the perceived value of their work.

Using stories of their professional experiences, participants provided examples of how clients express their need for nature and how the participants attempt to design for it. Discussions focused primarily upon practical implications of utilizing the need for nature theories in interior design, i.e.: the designer’s responsibility, financial costs involved, and the difficulty working with developers who are insensitive to
this need. Participants stressed the importance of introducing this information in interior design education.

References


CELEBRATING "HUMANITY, NATURE AND TECHNOLOGY" WITH INTERIOR DESIGN EDUCATION: TEACHING SUSTAINABLE DESIGN

Shirlee Singer
Eunju Shim
Iowa State University

Purpose

This presentation defines sustainable or green design as designing for human needs and responding to the four E's — ecology, economics, aesthetics and ethics. The significance of sustainable design is exemplified on NBC by Tom Brokaw's July 15, 1999 report that power use in this country has increased 167% in the last 10 years. Dr. Marilyn Black, a scientist working with the Environmental Protection Agency, indicates that indoor air pollution is worse than smog because we spend 85 to 94% of our time indoors (Black, 1998). Expanding research projects conducted by governments, advocates, manufacturers and educators demonstrates the growing urgency of environmental and health concerns.

The purpose of this presentation is to share the development of a working sustainable materials library, and benefits of applying sustainable resources in interior design education. The materials library is based on the selection of excellent information sources and carefully developed guidelines to evaluate sustainable materials. When students specify sustainable resources for studio projects, they benefit by learning the practical aspects of sustainable design.

Methodology

The first step of preparing to teach green design was building a sustainable materials library. The first decision to be made was to select the type of library suitable for our university. An article by Penny Bonda in 'Interiors & Sources' (Jan/Feb 1999) indicated that a sustainable library could be developed in two ways. It can be a separate resource within the regular library, or be integrated by marking sustainable materials in a distinguishing way. Because of space constraints we integrated materials and marked when with identifying stickers.

Next step the most crucial question was what would qualify as sustainable? After reading, comparing, and summarizing the literature from many sources, we developed a list of attributes and points to rank products for our library.

Finding sources for materials that meet our library criteria was the next. Primary Personal contact with firms identified as having sustainable libraries or specialized in sustainable design provided primary resources. Secondary sources were found through Web sites, published literature, periodicals, government agencies, and the Rep. Fair at EnvironDesign1, 2, and 3. Our sources were documented with a library database that is maintained by graduate and undergraduate staff.

To learn about the sustainable resources students take turns working in the materials library evaluating products. They write specifications and justify the choice of materials for their design projects. The combination of having sustainable resources, learning through discovery and meta-cognitive thinking equip students with knowledge, practice and philosophy about the balance of humanity, nature and technology.

Summary of Results

This presentation provides organized resource information to assist other interior design educators in teaching sustainable design and in developing their own sustainable materials library. Approaches for ranking sustainable materials, library types, database design and teaching strategies are included. Potentially everyone benefits by designs that satisfy human needs and protect the earth's resources.

References

INTERIOR DESIGN LEGISLATION:
CELEBRATE THE IMPORTANCE OF THE EDUCATOR’S VOICE

Linda S. Fisher, IDEC, IIDA
Kean University

Purpose

The Interior Design Profession is in a dramatic evolution, as we recognize our responsibility as interior design educators and design practitioners to construct our future through legislation, education, and research. The purpose of this presentation is to educate attendees of the 2000 Interior Design Educators Council (IDEC) Annual Conference as to the national and international Legislative Issues that are currently facing the profession of Interior Design.

Process

This presentation will highlight, define and discuss the following topics; Registration of Interior Designers, Case Analyses of Design Practice Registration Acts, Legislation’s Impact on Interior Designers’ ability to practice, the Interior Design Alliance and its efforts on code development, the economic impact of Interior Designers on the Consumer, and the overall effect of legislation on Interior Design Education.

Summary of Results

The anticipated outcome of this presentation will be an increased awareness by interior design educators to the importance of understanding the legislative issues that are rapidly affecting the profession of interior design. The interior design profession is facing tough legal issues, opposition from allied professions, and the potential of students being legally prohibited from practicing professionally the very body of knowledge that encompasses a majority of interior design educational programs on the national and international levels.

A discussion of the legislative climate toward Interior Design Registration will afford interior design educators the opportunity to understand how legislative issues effect interior design educational standards, program curricula, and interior design students and practitioners future ability to practice the profession of interior design.

References


CELEBRATING A PARTNERSHIP BETWEEN INTERIOR DESIGN 
EDUCATION AND THE PROFESSION

Svea Craig-Mason and Jacqui McFarland 
Interior Design Department 
Mount Royal College 
Calgary, Alberta,

Purpose 
The purpose of this presentation is threefold. It celebrates the uniquely supportive relationship an Interior Design program enjoys with the local design community. It outlines specific ways in which the program has successfully solicited industry support. It provides a forum for attendees to develop strategies to maximize their own program's relationship with the profession and/or to share their experiences with business/education partnerships.

Methodology 
Qualitative research methodologies were used to develop a case study. College documents and financial data were reviewed, and anecdotal interviews were conducted with students, alumni, members of the local related business community, college administrators, and program faculty. The information collected was analyzed and organized in categories. Conditions within the local design community were assessed as they might contribute to the success of the business/education partnership described.

Summary of Results 
Contributions made by the local design community to the Interior Design program were organized within five categories. The presentation will include examples additional to those outlined below.

Advocacy. The most dramatic demonstration of the design community's advocacy role relates to the 1998 conversion of the design program from a two-year diploma to a four-year degree. This initiative required lobbying for approvals within the college and in various levels of government, and involved highly respected members of the design community attending meetings, spearheading letter writing campaigns, and making phone calls to personal contacts with decision making power. Other advocacy activities are ongoing.

Provision of Resources. This includes donations of funds, capital goods, teaching aids and facilities to support department initiatives. Examples range from a one hundred thousand-dollar donation of furniture for faculty offices to an annual donation of metric architect's scales to incoming interior design students. Other gifts include the use of an executive retreat center for department planning meetings and a donation of funds to purchase artwork for faculty offices.

Support of Scholarship Programs. In the Faculty of Arts, the college administrative unit housing the Interior Design department, Interior Design accounts for ten percent of the total teaching hours. Of the scholarships available exclusively to students in the Faculty of Arts, seventy-six percent are specifically designated for interior design students.

Recognition of Program, Students, and Alumni. The design community consistently acknowledges links to the program in publications profiling professional work, in awards presentations, in marketing literature, in employee recruitment activities, and in employee appointment announcements. An annual fundraiser hosted by the Interior Design program attracts five hundred members of the related business community.
Provision of Learning Opportunities. Opportunities are consistently provided for students, faculty and administrators to participate in field trips to designers' offices, showrooms, job installations, and manufacturing facilities. Senior representatives from high profile design firms participate in an all-day student initiated networking event.

Conditions in the Local Community. A number of conditions, including the program's position as the single local provider of interior design education, contribute to the supportive nature of the design community.
INTERIOR DESIGN IN THE MILLENNIUM: 
PRESENT & FUTURE USE OF TECHNOLOGY BY DESIGN FIRMS 
& SKILLS REQUIRED OF NEW DESIGNERS

Phyllis Bell Miller, Ph.D., IDEC
Beth R. Miller, ASID, IDEC
Margaret S. Bateman, ASID, IDEC
Mississippi State University

Purpose/Issue

This presentation explores how firms that employ interior designers are using technology today and how they plan to use it in the future, what firms would like for interior design graduates to know, how technology has impacted the size and content of the sample room, and whether they are using the Internet as a recruitment tool. Firms are also queried on whether or not they have web sites, how they use them, and how they are maintained. The time adaptation of new technologies is explored as well as the firm size and type, project size and type, geographic location, and other demographics affect the adoption and use of technology.

Methodology

Designers were queried about their use of technology and the content of the firm’s sample room. This information was used to formulate a list of computer applications available to designers. This led to the development of a telephone survey form. Most questions were closed-ended, allowing subjects to select their responses from a list. The researchers conducted the interviews. In each firm, an interior designer responded to the survey. Firms were selected because of their diverse characteristics. Descriptive statistics were used to analyze the data.

Summary of Results

The sample for the pilot study consisted of 13 firms, six of which were included in Interior Design Magazine’s top 100 interior design giants for 1999 (Interior Design, 1999). Nine percent were located in urban areas with 100,000 to 250,000 people; 18.2% were located in urban areas with 250,000 to 500,000 people; and 36.4% in urban areas with 500,000 to one million people and in urban areas of one million or more people. Of the 13 firms 45.5% were interior design firms and 73.0 % were architectural firms. The remaining firm did architecture, engineering, and interior design. The firms employed from three to 46 interior designers; from 6 to 128 architects, and from zero to eight landscape architects. The firms queried employed a total of 183 interior designers, 533 architects, and 14 landscape architects.

When asked to list their major design emphases, 72.7% listed hospitality; 63.6% listed corporate; 36% listed educational and retail; 27.3% listed government and medical; 18.2% listed airports and churches; and nine percent listed banking, senior living facilities, residential, palaces, preservation, sports facilities, and traditional neighborhood development and planning. Average project size ranged from less than 50,000 square feet to 600,000 square feet.

Personal computers (PCs) were the most frequently used. Of all designers represented in the sample, only three did not have computers with CAD. AutoCAD Release 14 was the most frequently used CAD software was. Interior design majors will be more marketable if they acquire skill with AutoCAD, 3D software, Microsoft Office, Corel Office and the Internet.
References


1999 Top one hundred interior design giants. Interior Design, 70, 1, 74-94.
CONSTRUCTIVIST LEARNING THEORY & ITS IMPLICATIONS FOR THE USE OF TECHNOLOGY IN INTERIOR DESIGN EDUCATION

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Purpose

In the last decade, scientific research stemming from the field of Artificial Intelligence has led to the formulation of new theories of how people learn, and learn most meaningfully. One of the leading theories is known as “Constructivism,” which postulates that more meaningful learning occurs when a student is able to approach a subject via their own strongest point of interest; that learning is a non-linear experience; and that meaningful learning is “built” as a student assembles skills, knowledge, and experiences on an “as-needed” basis. Modern computer technology, both in software and the Internet, is particularly supportive of a Constructivist approach.

The discussion will center on the following: What is Constructivism? What are the implications of this approach to the teaching and learning of Interior Design? What are the implications for the use of Constructivist theory in the development of design courses for Distance Learning?

Process

An existing upper-level course, “Advanced Residential Design,” was taught using the Constructivist approach. Students were Juniors enrolled in the BFA program, and came to the class initially with generally good graphic and space planning skills. At every point, the students were guided to using technology in their work.

With personal meaning acting as a portal, so to speak, the students acquired the curriculum-required skills of larger-scale residential space planning; research into the needs of multigenerational living; kitchen and bath design; continuity of concept and parti throughout a single home; presentation of research, written program, and graphic and visual information. The non-linear approach allowed the students to proceed at different rates, to begin at differing places within the overall project scope, and to set personal goals which were independently achieved. Throughout, the professor's role was that of a resource person or guide.

Summary of Results

Through the previous five semesters, the students had been in tightly structured, sequential design studios and collateral classes. The constructivist approach enabled them to explore in depth those areas of interior design which were of personal interest to them. Each project was distinct and unique in program, design response, and presentation. All required skills of research and project development were achieved, with great personal reward.

References

SHIFTING TRENDS IN INTERIOR DESIGN CAREERS:
A STUDY INTERPRETING THE IMPACT OF THE INFORMATION AGE AND
A GLOBAL ECONOMY ON THE CAREER DEVELOPMENT OF GRADUATES

Marina Lommerse
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Purpose

This paper outlines a study that is a retrospective investigation of the career paths/patterns of interior designers over a 21-year period, between 1977 and 1998. The aim of the study was to document major influences and trends in their career development. In particular, the effects of global changes that contributed to career change were examined.

It is important that educational institutions prepare new graduates for the reality of the rapidly changing workplace, while providing experienced design practitioners and post-graduates with research that may increase their understanding of careers possible with an Interior Design education.

Methodology

Little documented research exists concerning the career development patterns of graduate Interior Designers/Architects. Thus, this applied research project was designed to contribute new knowledge in this important area. This research may benefit the development of undergraduate/graduate education curriculum, add to the professional development of practicing designers, and begin to lay a foundation for future research in this domain.

The hypothesis of the study was:
- The formative years (one to five) of a career are crucial to long-term success.
- Career myths exist that are outdated in practice, yet practice and tertiary education continue to support these myths;
- That planned career development in the Interior Design/Architecture profession is virtually non-existent;
- Therefore, career-planning guidance in undergraduate education and professional practice can be valuable to Interior Designers/Architects.

Both qualitative and quantitative methods were employed in this study. The research and analysis was primarily a qualitative/interpretive use of life history, supplemented by a survey questionnaire that was used to gather preliminary qualitative information from a comparative sample of Canadian and Australian interior design graduates.

Summary of Results

Emerging Career Trends. Fifteen trends in career development were identified, confirming the importance of the "building block" years—one to five. Additionally, as global change affects careers significantly, the need for career counseling in the profession was confirmed.

Conclusions. Conclusions were recommendations for further study. Among the recommendations were: broaden the study to see how it applies to other design disciplines; develop a teaching package/program for "Career Strategies for a New Age", to be offered to undergraduates and mature designers.

References


PROFESSIONALIZATION AS DEFINED BY ABBOTT: INTERNAL ACTIONS TAKEN BY ARCHITECTURE, INTERIOR DECORATION, AND INTERIOR DESIGN

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Purpose

Interior designers contribute to the built environment through the protection of the health, safety, and welfare of the public. However, it appears that neither architecture, interior decoration, nor interior design is perceived by the public as professions, even though they are labeled such by the professional literature (Iverson, 1995).

The purpose of this study was to apply the theory of professionalization as defined by Abbott (1988) to the practices of architecture, interior decoration, and interior design to determine which are professions. Professionalism is a pivotal issue, as society has reverence for its professions (Abbott, 1988). Without this distinction, practices face less certain futures in terms of their long-term stability, autonomy, and ability to influence the design of the built environment.

The theoretical basis of this study was research conducted by Abbott (1988) that defines and examines the internal actions taken by a practice to attain professional status. This study included an in-depth comparison of the three comingled design practices to Abbott's theory to determine if any are professions. In this study, external influences were not examined.

Abbott's theory identifies a series of internal actions practices take in establishing their jurisdictions. These actions operationalize the process of professionalization: (a) establishment of professional organization membership, (b) change of the practice's name, (c) establishment of a code of conduct, and (d) engagement in legislative actions. Two additional actions are intimated by Abbott (1988) and have been added: (e) establishment of educational requirements, and (f) establishment of examination requirements. These six actions occur sequentially, empowering the practice to achieve professional status.

Method

A qualitative research study was conducted based on Abbott's (1988) theory of professionalization. The three practices were examined, followed by a comparative analysis of each to Abbott's theory, specifically to determine which of the actions occurred in a practice's history. Data were collected in the form of written documents dating from 1926 through 1998 (AIA, 1993; ASID, 1998; IFDA, 1997; Kilmer & Kilmer, 1992; NAAB, 1984; Saylor, 1937; and Tate & Smith, 1986).

Summary of Results

Professionalization is a series of actions taken by a practice to claim a professional jurisdiction. Architecture has completed all of the actions and therefore addresses all of the characteristics of a professional jurisdiction. Though younger, interior design has addressed all of the actions of jurisdictional establishment, and is actively engaged in achieving them to the degree completed by architecture. Both practices have followed the exact steps prescribed by Abbott's model of professionalization, though interior design has yet to achieve legal recognition on a national basis. In all other capacities, the two practices are parallel.
In contrast, interior decoration has completed only two of the actions necessary to establish itself as a profession. Interior decoration's professional organizations have aimed at inclusion rather than examination qualifications, does not enforce a code of conduct, or specific educational requirements, and no action has been taken to obtain legal recognition.

This preliminary investigation is important to determine what place these practices hold in society today as defined in terms of professional standing. The future of interior design, as well as the welfare and satisfaction of its practitioners is dependent upon the status of the practice.

References


INTRODUCTION

INTRODUCTION

INTERIOR DESIGN RESEARCH: STATUS AND FORECAST

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Purpose

An overview of the state of interior design research has been compiled. This status report is organized around the trends identified by the Foundation for Interior Design Education Research (FIDER) Research Futures Roundtable and the International Interior Design Association (IIDA) Large Interior Design Practice Roundtables, 1997-1999. Nine trends came out of their discussions: Business Values/Ethics, Collaboration, Education, Environmental Justice/Poetics, Environmentalism/Sustainability, Ethnic/Cultural Diversity, New Knowledge/Rate of Change, Technology, and User Satisfaction/Improving Human Condition. Summaries of research for each trend will be presented and a future vision is forecasted.

Methodology

The method used to identify the research was generally a comprehensive literature review of journal articles, industry publications, profession organization publications, indices, and web sites. Key words were used during the search and included interior design research, all the categories identified, and cross-linkages between all included words.

Summary of Results

The trends are defined and a summary of two research projects for each trend will be given during the presentation. An annotated bibliography of the research and scholarly articles will be available to all participants.

Forecast. This overview shows that research is being conducted in the areas that were identified as priorities for interior design practice. We see several outcomes of this research overview.

1. Build a bridge between practice, industry, and the academy for the development of research questions related to the areas identified.

2. Identify ways practice and industry support research and ways that support could be increased.

3. Develop the framework for a design research institute whose participants could collaborate on the research questions, establish an interface with research in other disciplines, and facilitate a more timely and user friendly dissemination of research results.

We can develop an interdisciplinary, inter-university, international, practice-industry-academy collaborative called something like the Center for the Advancement and Dissemination of Design Research. The purpose of such a Center will be to conduct research concerning the relationship between human beings and the designed environment. The Center could perform research, translate research findings into design criteria, disseminate findings and criteria, and educate practitioners about research and researchers about practitioner's needs. The Center could partner members of the interior design community including researchers, practitioners, industrialists, educators, and clients to provide an avenue for these partners to form a cohesive force that will shape the future of interior design by building the body of knowledge about interior design.
Conclusion.

We have presented the status of interior design research within a framework developed by various futures focus groups. We have forecasted a method by which we can eliminate those obstacles. What we need to do now is develop this collaborative research model by inviting one another to share in the resources and knowledge that we each have. Extend to one another your personal and professional courtesies and take action. Today, we need to develop an action plan with strategies and resources identified to move interior design research forward. From the vision, we need to create the reality.
AN EMPIRICAL ANALYSIS OF THE JOURNAL OF INTERIOR DESIGN

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Purpose

This study documents a content analysis of the Journal of Interior Design Education and Research (JIDER) and Journal of Interior Design (JID) from 1975 to 1997. The purpose was to identify the knowledge base within this journal and predict trends for future research.

Methodology

Researchers collected data from two sources in the journal: indices and articles. Indices provided data concerning allocation of articles into identified subject matter categories. Four decision rules were developed to achieve consistency. Occasionally, authors of certain indices placed a single article under multiple subject matter categories. Therefore, to identify trends over time, researchers also content analyzed each article to categorize it into one subject matter category. The analysis addressed questions pertaining to: 1) classification of articles (research, editorial, theory development); 2) research methods (quantitative, qualitative, mixed and other); 3) patterns of authorship (affiliation, collegiality); and 4) funding sources. Data analysis was conducted via frequency distribution.

Summary of Results

Two hundred sixty-six articles were published in the 23 volumes of JIDER and JID. The two subject matter categories with the most journal articles include pedagogy/program development (n=80) and history (n=31). When reorganized into only one of the 40 subject matter categories, 62 (23%) of the 266 articles were devoted to pedagogy/program development. History, representing 28 articles (12%), was the second most studied subject matter, followed by professional practice/practice (n=26; 10%). Some subject matter categories (e.g., architecture and energy) appeared in earlier volumes of the journal while others (e.g., lighting and undergraduate education) emerged in more recent issues. Of the 266 articles, 183 (69%) were research, 52 (20%) were editorial, and 31 (11%) pertained to theory development. Research articles were found in 31 of the 40 subject matter categories, editorials related to 18 areas, and theory development was identified in 14 categories. Research methods in the articles included quantitative (n=81; 40%), qualitative (n=50; 19%), mixed design (n=28; 11%) and other (n=107; 40%). Of the 84 academic institutions represented, authors from land grant universities predominated in publications.

Analysis revealed diversity of topics within the field of interior design. Trends may be related to the editor who has a unique role in shaping journal content (e.g., Oliver & Mahoney, 1991). Special issues can skew the picture of topical trends that reflects a particular discipline. Trends may reflect available funding. For example, articles focusing on preservation/restoration appeared during the editorship of Rogers and Hawn (1975-1981) coincides with governmental interest in urban renewal and energy conservation.

Most recent trends in JID relate to issues within the built environment, universal design, and K-12. With the aging population, future trends may relate more to healthcare and designs for special populations (i.e. Alzheimer's). In addition, opportunities identified by Dickson & White (1995) offer suggestions for applied research in the field (e.g., common language among profession).
The Journal of Interior Design has served as a communication vehicle for the profession. It has provided a publication vehicle for educators, a recording vehicle for capturing issues and a content vehicle building the body of knowledge for a credible profession.

References


TAKING THE BYTE OUT OF BALSA: BUILDING MODELS IN A NEW MILLENNIUM

Thomas L. Houser
The University of Georgia

Purpose

Few educators or designers question the value of model building as a way to test or explore design options. This presentation assesses model building techniques appropriate for the evaluation of interior design in general and the study of building systems in particular. It contrasts approaches to conventional and digital models.

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Project

Defining the Project. The fully accessible poolside green house included a communal hot tub, lounge area, a bar, showers, toilets, dressing areas, pool equipment storage, plant care center, and significant display space. Along with other building systems, students addressed passive and active solar and wind design considerations, as well as basic green design.

Defining the Students. Three groups of students confronted this project from diverse curricular perspectives. The first completed it as part of a building systems course. They employed conventional drafting and model building techniques. The second group designed it within a beginning computer-aided design class. Unlike the first group, they had no previous or concurrent courses in building systems. With this group, construction technology was used to teach 3D computer commands. The third group completed the project while taking concurrent CAD and building systems courses.

Models

Conventional Techniques. During preliminary design phases, students built mass models out of paper and cardboard to study interior and exterior building forms and spatial relationships. After modifying the models appropriately, they drew basic plans, elevations, and building sections based on the models.

In the contract documents project phase, students developed dimensioned plans and building sections. They also built detailed cut-away construction models from balsa and foam core. These models included wood frame construction components in walls and around doors and windows; electrical wiring for convenience outlets and light fixtures; and supply and return pipes for plumbing fixtures.

Digital Techniques. During preliminary design phases, students extruded basic building shapes and furniture forms. They then viewed these in isometric and perspective views to study spatial relationships. Once they were satisfied with the designs, they turned the models into plans with a few clicks of the mouse.

During the contract documents project phase, they added dimensions and notes to the same drawing. They also created detailed cut-away construction models. This time, however, instead of cutting and gluing numerous balsa strips, they extruded rectangles and snapped them into place. The digital models reflected the same building components as the conventional models.

Summary of Results

Students having basic CAD skills created 3D study models earlier in the design process than those employing conventional drafting and model-building techniques did. They also more readily made changes to their designs after evaluating digital models. All three student groups overwhelmingly expressed enhanced appreciation of building systems after making the detailed 3D models. Although time records were not kept, most students making digital models did so in significantly less time than their
counters making models from conventional materials.

Bibliography


NEW PROGRAMMING METHODS AND THEIR IMPACT ON PROJECT OUTCOMES

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Purpose

This presentation will focus on the relationship between programming research and design outcomes using a collaborative work process. The discussion will include the development and use of contemporary programming and planning methods considering the rapidly changing corporate business environment, scale and time. The topic will be explored using the design of the Sprint World Headquarters Campus as a case study. Sprint is a dynamic, global telecommunications company, currently constructing a 3.8 million square foot facility to house 15,000 knowledge workers. It is one of the largest commercial building projects in North America.

Process

Due to concern for availability of labor and materials in the region necessary to accomplish design and construction, the project is being delivered in five phases over a four year period. In response to the dynamics of business driven change throughout the building cycle, the team developed a collaborative planning process and automated programming methods using internet-based tools. Tools were linked to a customized database to document changing client needs. At the conclusion of planning for each phase, the programming team formally evaluates the tools and processes and implements upgrades.

Summary of Results

The result of the process has been design responsive to the changing needs of the client, maintenance of project schedule and development of a detailed, current database used by facility managers in the ongoing maintenance of the campus.

The continuous process improvement initiative has proven to be an effective way to continuously upgrade methods and tools to achieve greater effectiveness and efficiency. Findings from the evaluation at the completion of Phase I resulted in a 4 week reduction in schedule through added collaborative team reviews, improved communication graphics, and upgraded features in the data gathering tool and subsequent reports.

This project has provided a greater understanding of the dynamic relationship between programming data in changing business environments and it’s impact on design, building methods and project costs.
BACK TO THE VILLAGE: IMPLICATIONS OF THE NEW OFFICE ENVIRONMENT

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"Innovation in office design starts from the inside and works its way outwards, changing not only the building shell but its relationship to the city."

Francis Duffy, 1997

Purpose

New organizations are lean, representing diverse work stimuli encompassing virtual tasks. In 1995, five work environments were identified by a telecommunications planning team as alternate. "We need to look more ... at the human factor and [develop] a sense of community. The future ... lies in the village rather than the club." (Duffy, 1997: 196-197)

Methodology

The commercial design studio, which traditionally focused upon office design of the 70s and characterized by fixed but flexible space, is no longer pertinent. Nor is the impact of technology the driving force behind the office workplace. Rather, new ways of communicating are driving the work agenda. Reinforcing the sense of team and community are necessary to promote work productivity and job satisfaction. Students, educators, and practitioners require different information about workplace issues. How will this information be disseminated? How does the client program reflect new work communication? How will educators stay current on workplace practices of the next millennium?

The virtual office, pioneered by Chiat/Day, has implications for the development of space planning including diminished square footage and new adjacency relationships presenting additional markets within which the designer can offer expanded services. Using a model introduced by Francis Duffy (1997), interaction and autonomy can be observed in relation to work setting types defined as the "den, hive, club and cell". The survey of design offices will categorize office activity in order to assess the impact to which new officing concepts are affecting the workplace of today.

The traditional office has not disappeared. However, the impact of information technologies is quietly re-shaping even the most traditional of spaces. E-mail, the Internet and the speed at which information can be accessed affect the very core of work practice. In the past, offices supported the storage of paper and equipment; now, with electronic information, the "paperless office" touted in the 80s is becoming a reality. The work setting may be a chair, phone booth, break area or work surface positioned somewhere, anywhere, near an Internet connection. The development of needs for this millennium process is critical to the understanding of practitioners, educators and design students.
Summary of Results

Shared stories of studio projects, resources and recommendations will be identified and reinforce the need to develop methodologies appropriate to gaining insights to the operation of the virtual office. The panel will disseminate new information regarding the survey of design offices. Whether the office represents the view of the 'village' or one of Duffy's functional 'types', participants will come away from the session armed with ideas for new studio challenges, new information about workspaces, and resources for continued learning.

References


A HANDS-ON, COLLABORATIVE PROJECT FOR INTERIOR DESIGN STUDIO

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Purpose

The student union at our university has recently been renovated and, according to the Wall Street Journal (Peterson, 1997), provides an outstanding example of meeting needs of students and staff while providing an exciting visual environment. Part of the renovation included taking an obsolete pub and turning it into an upscale coffeehouse. The coffeehouse is particularly noteworthy because interior design students were the primary source of design ideas and implementation. Our interior design curriculum prepares students to enter the workforce with a comprehensive coverage of knowledge and skills. One series of successful course projects for senior studios has been the renovation of university spaces from research and programming stages to complete installation.

Our purpose is to describe the excitement of student projects while presenting some opinion data from participants from 10 years of campus projects. The topic is particularly fitting since it relates directly to several presentations made at the 1999 IDEC Conference (Dunbar & Kruel-Froseth, 1999; Honey, 1999; Hubbell, 1999; Rogers, 1999; Rengel, 1999; and Vogel, 1999) which stressed such concepts as collaboration, cross-disciplinary interaction, hands-on, pre-programming research, and document production.

Methodology

Qualitative research methodology will be used to describe the process followed to complete a one-semester hands-on design project. Examples from previous projects will be shown. A non-experimental, descriptive research strategy will be used to present opinions of graduates about the benefits of their participation and results of interviews of key personnel who supported student projects. Triangulation will occur as observations, surveys, and interview results are synthesized.

Summary of Results

Conceptual phase. Students are divided into teams of four to five to develop proposals for the design problem. Each team is required to present floorplans, elevations, perspectives, details, lighting plans and specification books as a minimum in a formal, oral presentation to those who are expected to use the space. Each group will have synthesized the data and the needs expressed by the clients and will have considered the psychological and social dynamics that will make the space functional, comfortable, and aesthetically pleasing.

Implementation phase. Once the proposals have been presented, the clients will decide on a final plan. Often the solution is a combination of the ideas of the various teams. Students are then divided again into groups which become responsible for different aspects of the construction, product procurement, and installation. During the implementation phase, students benefit from experiences which include: communicating with clients and building specialists, estimating, installing, choosing fabrics and finishes, coping with budgets and deadlines, and installing furnishings and accessories.

Evaluation phase. Results of the surveys and interviews will be analyzed to determine if the positive feelings which seem to result from a job well done carry over into future perceptions. Most projects end with a reception that includes the students and the intended users of the space. The stresses of the semester-long timeline vanish as the result is savored. The descriptive data will
lend be useful in planning future projects and strategies to use in providing collaborative, hands-on, cross-disciplinary experiences for students.

References


COMMUNITY DESIGN WORKSHOP: A CASE STUDY OF COLLABORATION

M. Jean Edwards

Purpose

In their study of architectural education, Boyer and Mitgang (1996, p. 138) noted that "... there must be a seamless connection between learning, the generation of new knowledge, and community service. ... The goal should be to provide opportunities for students and faculty to work together in communities to produce genuine scholarship with broad applicability, and to disseminate those findings so that others can benefit from those experiences."

This project's primary objective was to develop design interventions that could mitigate the negative impact of a proposed elevated interstate highway on a disadvantaged community. The "Community Design Workshop," a collaboration of twenty students and nine architecture and interior design faculty with different areas of expertise, was engaged by the local governmental planning board to bring their design skill and knowledge to the problem. The three interior design faculty members involved in the project provided expertise in the areas of lighting, acoustics and public art. Ultimately, the goal of the collaboration was to weave the elevated highway into the existing city fabric.

Methodology

The elevated interstate highway involves a six-mile corridor through an established, disadvantaged neighborhood near the city center. While the proposed interstate holds the promise of increased economic opportunity for the region, it also means the disruption of neighborhoods and existing road infrastructure. The "Community Design Workshop," a four-year old departmental collaboration of students and faculty under the direction of an architecture faculty member, established its office during the summer of 1999 in the community where the project is located. This local presence provided the community with on-going access for the duration of the project. Collaboration with the community was encouraged also through public design charrettes and meetings where multiple constituencies within the community provided feedback. In this way the community helped to define the parameters of the project.

In addition to their obvious and primary concern for the dislocation of people and housing along the proposed highway, community participants in the design charrettes also expressed concern for the following:

- the preservation of special places along the corridor
- the restoration of connection between the neighborhoods and the city center
- the regeneration of the affected neighborhoods
- the desire for green space along the corridor

The interior design faculty and students studied the latest research in lighting and sound control. Case studies of well-designed highway construction and the use of art in public spaces were also researched.

Summary of Results

The collaboration between the community and the "Community Design Workshop" resulted in design proposals that reflect the application of current research to community needs. Public presentations of the design proposals have been enthusiastically received by the Chamber of Commerce, the City Council and various neighborhood groups within the affected community. "The Community Design Workshop" has established credibility with local government and has helped give a voice to a community that has long gone unheard.
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OLIVER MESSEL: CREATING THE MYSTIQUE OF MUSTIQUE

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Issue

Limiting our exploration of design styles to acknowledged masterpieces both inhibits full understanding of the role of style in history and diminishes opportunities for experiencing designs that could suggest new directions. Oliver Messel, a luminary in the theater, is little known outside that milieu, yet his shaping of the built environment on the Caribbean island of Mustique still resonates in the lifestyle and continued development of this ‘fantasy island’. In studying his design influence in one remote locale, we can examine, in microcosm, the development and endurance of style in general.

Process

An examination of the design precedents and innovations apparent in Messel’s work reveals the authenticity of his contributions from both aesthetic and functional perspectives. Perhaps initiating current use of nineteenth century styles for resort architecture, a trend that has continued at Florida’s Seaside, Messel utilized the picturesque imagery developed by English architects like Lugar, Goodwin and Robinson, popularized in America by Downing and Davis. One assessment of Seaside is particularly telling as it relates to the development of Mustique: “a devotion to the past has become the link between the disillusion of the present and what was once thought possible in the future” (La Frank, 1997). Borrowing filigree hargets, trellises, fretwork, finials and gingerbread brackets and railings from the English “cottage ome”, Messel ignored the asymmetry appropriate to the type in favor of the symmetrical Palladian villa. Though often small, his houses were for wealthy jet setters, making the use of the more aristocratic style an appropriate decision.

Equally appropriate are adaptations he made in response to the island’s terrain, its tropical setting, and the prevailing holiday lifestyle. Hyphens connecting the central building to flanking pavilions are roofed walkways, open to ocean breezes and views. The informality of the island makes foyers unnecessary, so the main entry opens directly into a living room with a perfectly framed view of the property’s most spectacular vista. References to English, French and Spanish colonial styles are apparent in his houses, and the use of native Caribbean elements such as the push-out shutters called demerara, as well as the use of local coral stone and native woods, responds to the island’s historical context. The designer’s use of concrete flooring was budget based, but his innovations in dyeing, staining, scoring, stamping and inlaying this humble material with stone or tile displays a resourcefulness born of his theater experience. Techniques he employed to enrich concrete in the sixties have only recently been ‘introduced’ as alternatives to more expensive floor finishes.

Summary

Messel’s work on one small island is a synthesis of traditional stylistic devices and innovative adaptations exhibiting both aesthetic impact and practical application. His contributions to the island’s unique mystique have proven to be enduring, in that even the most recently completed houses pay homage to their predecessors in plan, detailing and furnishing. The design vocabulary of many designers influential in their own regions deserves further exploration, and the work of these lesser known but accomplished practitioners is worthy of design educators’ and students’ attention.

References


THE SPLENDOR OF NATCHEZ: GLEANINGS FROM 19TH-CENTURY DECORATIVE ARTS NEWSPAPER ADVERTISEMENTS

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Karen Rankin Hill
Independent Researcher

Purpose

In the present-day search for documentary information relating to the early decorative arts, an important source is the contemporary newspaper. This source is often neglected due to the time consuming and cumbersome process of digging through massive amounts of faded microfilm. Newspaper advertisements produce valuable evidence of materials, origins, new innovations, as well as, local manufacturers and retailers at a known date. Deductions may be drawn from this body of information for correctly furnishing historic restoration projects (Dow, 1927). Therefore, the purpose of this paper is to document the author's efforts to organize advertisements from 19th-century Natchez, Mississippi newspapers into a reference directory.

Background

This paper will address advertisements found in Natchez, Mississippi before 1860, representing its growth and height of prosperity. Located in the center of the world's richest cotton lands, Natchez became one of the great ports of the Mississippi River (Cooper, 1957). By the 1850s, Natchez was the richest town per capita in North America (Gandy & Gandy, 1978) and a recognized center of wealth throughout the country (James, 1968). Publication of the Natchez newspapers began in the late 18th century. Currently these papers are available on microfilm.

Methodology

Documentation of newspaper advertisements is best collected using the historical method of research. A literature search uncovered several similar studies conducted in other areas of the United States, including Boston, New York and Philadelphia. Reviewing these existing newspaper advertisement reference directories provided information on data organization. In chronological order, the first appearance of each decorative arts advertisement is recorded using the original wording and spelling.

Findings

A review of advertisement content allows the researcher to find the specific decorative arts that were available to the local society. Information is also revealed about origins, changing technologies and regional distinctions.

A wide variety of decorative arts were available to the Natchez population. The advertisements show most furniture offered in Mahogany, Rosewood, and Walnut, although there are random offers in less common woods. In 1852 J. Warner described for sale a "Splendid Boxwood Escritoire Desk" (Mississippi Free Trader, 1852, January 21) and others sold items of Maple, Oak and Poplar. Faux finishes were also popular, including "Marbleized Iron Mantles" (The Daily Courier, 1853, December 1) and "imitation rosewood Harracks" (Natchez Weekly Courier, 1859, August 10).

Advertisements reveal much information about including the manufacturers and locations. They also show the varieties available, sizes and materials.

Newspaper advertisements also give us a gleam of the industrial revolution as it is introduced to this society with new materials and innovations. One also sees the introduction of "cottage
furniture" referring to smaller furniture made of lesser expensive woods (Clinkscale, 1993) perfect for the growing middle class and smaller interiors.

Conclusion

Newspaper advertisements offer scholars valuable evidence when correctly furnishing a historic home. Arranging this body of data into a reference directory should be invaluable to the Natchez area, and decorative arts studies throughout the United States. Comparative studies may show regional distinction, if any, as well as the level of ante-bellum culture in the South.

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KNOWING WHAT AND KNOWING HOW: STUDENT LEARNING IN AN ACTION RESEARCH STUDIO

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Purpose

Complex interior design projects engage teams of professionals in problem solving that requires both critical and creative thinking skills. Seeking both to provide students with practical experience in complex problem solving, and to teach them good 'habits of mind', a group of educators developed a studio project based on an action research process (Greenwood & Levin, 1998). An interdisciplinary team of professors and students from a College of Architecture assisted the University's College of Law, by developing a preliminary program and exploratory designs for a 150,000 sq ft project to include a new building, renovations to its existing facilities, and exterior spaces. One objective for this studio was to improve students' critical thinking ability. Specific instruction taught students what good critical thinking is and the project structure allowed them to practice it within the design process. In order to evaluate student learning regarding this goal, researchers used an objective measure to test whether students' who participated in the studio displayed an improved ability to think critically.

Methodology

Critical thinking (CT) is defined as the process of judgment (Facione, Facione, Blohm, Howard, & Giancarlo, 1998). At the core of critical thinking are the cognitive skills of interpretation, analysis, inference, evaluation, and explanation. These skills are employed interactively in the reflective reasoning processes people use to make judgments about what to believe or do. Using an objective measure for critical thinking - California Critical Thinking Skills Test (CCTST), researchers performed pre-project and post-project assessment of the 20 interior design students who were involved in the College of Law project. Comparison of pre- and post-project data should identify improvements in students' critical thinking abilities. (Post-project score data, analysis and comparisons will be available in March - at the end of the studio project).

Analysis of the pre-project CCTST score data shows that the group of test students employed above average critical thinking skills. (see table 1) The group's mean score was 16.6 which is 1.69 points higher that the average of the norm sample – 15.89. Analysis of frequency distribution for percentile rankings showed that 70 percent of the scores fall in the middle and top quartiles. The highest percentage of scores -- 20% -- fall in the 50 – 59th percentile range. (see table 2)

Summary of Results

Interior design professional activity often involves creative problem solving in situations where the human, aesthetic and technical issues are complex. One of the goals of this innovative studio project was to improve students' critical thinking. Thus, we expect the analysis of pre and post test scores to show improvement in this area. We concur with the educational philosopher John Dewey that learning by doing strengthens educational process. In the action-research studio, thinking and doing operate in conjunction. Students learn how both an expert who 'knows what' knowledge to use to make decisions and a reflective problem solver who 'knows how' to operate in complex situations.

References


ARE INTERIOR DESIGNERS URBAN PLANNERS? A NEW FOCUS FOR THE JOINT STUDIO CURRICULUM

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Purpose

The joint studio has become a standard component of schools with both architecture and interior design programs. Typically, students from both disciplines come together in pairs to design one building, resolving conflicts as they go. Often, the students have not been prepared for the challenges of working with another person, especially one from another discipline. This forced working relationship can cause the project to lose focus and direction. However, a different way of structuring studio can lead students into a more promising and productive atmosphere. Group and individual projects can be balanced when urban design is used as a source of commonality.

In a downtown joint studio, interior design students worked with architecture students to redesign a prominent street in a failing downtown area. Collaboratively, they programmed and designed the street, with the interior designers contributing a valuable knowledge of proxemics, an understanding of interior/exterior relationships, and an eye for detail in analyzing the street as a space. In the final phase, architecture students focused on designing new structures and interior designers on the adaptive re-use of existing buildings. The city and the students benefited from the valuable ideas exchanged, leading to carefully devised and integrated solutions.

Process

Each program felt they could make significant contributions to varying ends of the urban scale. The initial phases focused on truly integrating the two disciplines into one group, where principles of urban design were uniformly taught. This provided each group with an equal knowledge base for contributing to the project.

Interior design students guaranteed that things like human comfort and connection to place were considered. They contributed a knowledge about programming, designing the streetscape to the human scale, street furniture and lighting, internal courtyards, and circulation patterns. Architecture students continually grasped more of the larger scale issues, such as the connection of the main street to the rest of the city and solving issues of traffic flow, green space, and building scale.

The final phase shifted focus to the individual project. Here, more overlap occurred between the disciplines than was originally expected. In some instances, interior design students voluntarily designed street facades or worked on master planning issues. Some architecture students developed interest in redesigning existing buildings from interior perspectives. Each student was given some flexibility to explore new ideas and develop new skills.

Summary of Results

The students benefited from working first as a group and then as an individual. Together, they accomplished the studio's mission, which included increasing the public's awareness of downtown, establishing ties between the university and the city, and contributing important concepts for the revitalization of the main street.

The students truly understood the importance of collaboration. They gained an appreciation of the issues on which the other discipline placed emphasis. They produced equally valuable concepts and proposals to increase downtown viability. In particular, interior designers learned how significant their contributions could be to downtown revitalization efforts, providing them
with the ability to re-interpret their roles as professionals and advance their skills as overall players in the expanding field of design.

References


THEORETICAL FRAMEWORK FOR INSTRUCTION THAT ACCOMMODATES ALL LEARNING STYLES

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Purpose

Learning style is a "means by which one learns—each individually different and relatively comparable to intelligence or personality" (Eysenck, 1990, p. 208). Learning styles vary from person to person, similar to how personalities vary from one individual to the next. Learning style theories show that individuals learn in different ways (Claxton & Murrell, 1987; Kolb, 1985) and have different strengths and weaknesses (Kolb, 1985). Teaching strategies to encompass all learning styles will allow students to learn through their style and be challenged to learn through other styles.

Since all learning styles have been found among interior design students (Nussbaumer, 1998), the implementation of learning styles in the classroom is important. Eggen and Kauchak (1994) state that since students have different learning styles, this suggests the need to vary instruction. There are alternatives to lecture such as discussion, cooperative learning, individual studies, and field experiences. These will provide a flexible means to accommodate learning styles.

Review of Literature

According to Kolb's experiential learning theory (1985), learning is a four-stage cyclical process even though people go through these stages differently and have strengths in different stages of the process. Learners begin with a concrete experience by fully immersing themselves in the subject. In the next stage, reflective observation, learners reflect on their observations from different perspectives. Then, they move to abstract conceptualization in which they build theories or generalizations by integrating observations. The fourth stage takes learners to active experimentation; at this stage, they use theories or generalizations and apply them to real-life situations or to practical problems (Kolb, 1985; Sims & Sims, 1995a). This completes the cycle, and the result of this process is a new concrete experience.

Further, Kolb (1984) explains that there are two basic dimensions to experiential learning theory. One dimension is that people grasp new information through either concrete experience or abstract conceptualization. In other words, they begin the process at different points. Then, they process or transform the new information through the dimension that follows, either reflective observation or active experimentation.

Kolb (1984) developed four learning styles from the four stages of the experiential learning cycle: diverger, assimilator, converger, and accommodator. Another researcher, McCarthy (1980) superimposed hemisphericity with the construct of a four-stage model, which was developed from Kolb's work. She proposes that learning is a spiral process in which each lesson is presented from the perspective of all four styles accompanied by left/right brain hemisphericity.

Summary

Researchers found that the use of learning style theory in instruction will achieve academic success and develop well-rounded individuals (Kolb, 1984). Since all learning styles were found among interior design students, instruction should vary through use of a learning style theory that will accommodate students' learning styles and challenge students to learn through other learning styles. As a result of this thinking, Kolb's experiential learning theory and learning style types and McCarthy's concept of hemisphericity were used to develop a theoretical framework for interior design instruction that accommodates all learning styles.
and superimposes hemisphericity. Uses of this theoretical framework will be discussed during the session.

References


LEARNING STYLE: IMPLICATIONS FOR LEARNING AND TEACHING

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Purpose

The purpose of this presentation is to facilitate educators’ understanding of the role that learning style plays in the development of interior design students, to explore integration of learning style into classrooms, and to determine dominant learning style of conference participants as measured by the Gregorc Style Delineator.

Introduction and Review of Literature

Research has shown that learning style influences how students learn, how teachers teach, and how they interact (O’Brien, 1991). Colleges and universities today show an increasing disparity between faculty and students, between instructor and learning. What suffers as a consequence is the learning process itself, an observation that pervades numerous national reports on the status of higher education written in the 1990s (Schroeder, 1996). Unfortunately, the natural differences in learning patterns exhibited by new students are often interpreted by faculty as deficiencies. What may be happening, then, is a fundamental “mismatch” between the preferred styles of faculty and those of students.

Learning styles can be defined, classified, and identified in many different ways (Tharp, 1989). Generally, they are overall patterns that provide direction to learning and teaching (Cornett, 1983). Learning style can also be described as a set of factors, behaviors, and attitudes that facilitate learning for an individual in a given situation (Reiff, 1992). There is no right way to learn, but there are certain styles that are more appropriate for a given situation. Thus, when an individual learns, the style may be unique to the task or it may duplicate a previous experience (Entwistle, 1981).

Anthony Gregorc (1982) has conducted a great deal of research in the area of learning styles. Gregorc’s model is based upon his mediation ability theory which states that the human mind has channels through which it receives and expresses information most efficiently and effectively (Gregorc, 1982). The model is purported to address the mediation (cognitive) abilities of perception and ordering. Perception is represented as a bipolar continuum ranging from abstract to concrete. Ordering is represented as a bipolar continuum ranging from sequence to random. Using a quaternary design, Gregorc combines these activities to form four mediation channels: Concrete Sequential, Abstract Sequential, Abstract Random, and Concrete Random. Gregorc suggests that while all individuals possess some base level of ability in all four dimensions, most individuals exhibit a natural predisposition toward one or two of these channels (Gregorc, 1982).

Outcomes and Conclusion

This presentation will define learning style and the role that learning style plays in the classroom. Diversity in student learning styles anchor the argument of the need for instructors to have a repertoire of teaching methods. Because teaching style affects the learning success of students in specific kinds of situations, instructors need to be sensitive to learning style differences. Instructors should also be familiar with their own learning styles as part of self-awareness. Through the Gregorc Style Delineator, participants of this presentation will be assessed for their dominant learning style. Manifestations of this presentation can be used to improve interior design education through the design and delivery of courses, faculty development activities, and promotion of classroom-based research.
References


PEN AND PAPER SKETCHING AND VISUALIZATION: CAN A COMPUTER PROGRAM HELP STUDENTS PRACTICE?

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Issue

The ability to sketch in order to visualize the three-dimensional nature of architecture is a desirable quality in a practicing interior designer (Diskman & Pile, 1985; Henton, 1980). The content of the NCIDQ licensing examination confirms the importance of pen and paper sketching ability for interior designers. It remains, however, that the lack of sketching ability is still the foremost cause of failure of this examination (S. Klinkhamer, personal communication, 1999).

While sketching skills are typically taught to students in studio classroom settings, there is usually insufficient class time for students to master sketching, a skill that requires extensive practice. Instructors often discover that their students come to studio class with a wide variety of pre-existing sketching abilities that makes it difficult to keep the class together (S. Cooke, personal communication, 1999). Students experiencing difficulty with sketching can also feel intimidated in the group environment that characterizes the studio classroom and may never catch up. Such a situation suggests that guided practice for sketching outside of class may be of benefit to students. A computer format might offer advantages for pen and paper sketching practice (Lesgold, 1982; Salisbury, 1990).

Methodology

A CD-ROM-based multimedia computer application entitled Foundations of Quick Sketching: Two Point Perspectives has been developed that offers guided sketching exercises to students for out-of-class practice. The program is characterized by the following attributes.

- Fifteen practice scenarios provide students guided structure to their practice, allowing them to better pinpoint and practice their weak areas.
- Students can repeat the scenarios an unlimited number of times in an environment free of others' critiques. The program records the nature of their practice for instructor review.
- The computer application uses a timer function that allows students to monitor and increase their speed of sketch completion.
- Self-reflection is required, thus compelling students to evaluate their sketches and compare them to other provided solutions.

The program further makes use of multimedia features that seek to increase the student's pre-sketch visualization ability and emulate the real-life situations of sketching students will encounter in their careers.

- Virtual reality scenes allow students to manipulate a mouse and view a scene from different perspective views prior to sketching it.
- Digital video segments show experts explaining and completing a sketch students then complete themselves.
- Sketches completed by a variety of experts are included to expose students to multiple styles of drawings.
- Audio files of the 'client' speaking to the student play while the student is sketching, requesting that they change the sketch to suit new requirements. This forces students to get used to sketching and listening to their client simultaneously.

Summary of Results

The completed program is currently in beta-testing with interior design students. The program is part of a larger study that will examine the effect of a studio course employing both traditional and computer-based instructional teaching strategies on students' sketching
abilities and attitudes toward computer-based instruction.

References


DIGITAL DESIGN TRENDS: VISUALIZING, DESIGNING AND COMMUNICATING IN INTERIOR DESIGN

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Purpose

Computer usage in Interior Design has to date focused on visualization, design and communication using varied modeling software. This presentation explores digital design trends in Interior design studios through three modules: a visualization tool using various modelers; automated systems as generators for design alternatives; and high performance communication using Internet2 and a consortium of 159 universities. Using these 3 modules, implications for future learning will be identified.

Process

**Visualization.** Bertol (1994) notes with the advent and improvement of three-dimensional (3D) design and animation software, designers now have more sophisticated methods of presentation. This module presents methodologies for teaching modeling, rendering and animation in interior design curriculums. Teaching these courses as separate modules outside studio, reduces the effect of overwhelming students with technology, and offers an opportunity to explore modeling concepts, which can then be applied in studio. Separation from studio may also improve quality of project presentation.

**Design.** This module explores new ways in which computers can be used to explore and generate design by defining design rules that are programmed into the computer. Several concepts like recursion, random generation and shape grammars are explored in order to produce a wide variety of possibilities. Developing algorithms in design entails understanding the built-in programming language of computer-aided design systems. Most computer-aided design software incorporate this built-in capability, allowing rules to be expressed as grammars, which are then written as lines of codes into the computer. Case studies will illustrate how *AutoCAD* can be utilized in generating design form, thus permitting the user to emphasize and determine which elements and principles of design enhance their concept development. The goal is to expand hand-drawn capabilities by utilizing the inherent properties of the computer through programming to explore a wide range of alternatives unknown to the designer.

**Communication.** McConnell and Waxman (1999) note “the computer has become an important communication tool between interior designers and clients and is now considered essential in many design firms”. Faculty and students in programs of interior design want to engage their students in learning that is centered around practice. But how will groups, in many different geographic locations communicate? Communication of information involves improving the interface between practice and education. This model explores Internet2, a consortium of 159 universities that are on a high performance network, called Abilene. The capabilities of the high-speed network include video conferencing, distance learning, archiving, digital libraries, 3d-visualization and streaming video.

Summary

Through case studies, this presentation focuses on debating digital design trends in Interior Design through utilizing the computer as a visualization, design and communication tool. Implications for the next generation of computer learning are defined and indicate a new set of learning objectives. Perhaps, as expertise in visualization skill increases within the profession, the development of design algorithms through automated systems is an area that needs to be explored by designers, to utilize computers
to their fullest capabilities in creative thinking and problem solving.

References


REASONS TO BE CHEERFUL, PART ONE: CELEBRATIONS AND RITES OF PASSAGE FOR INTERIOR DESIGN STUDENTS

Jane Lawrence
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University of South Australia

“There are times when everyone can feel the rhythms of life and rapture of celebration. They are moments when people can have their culture and eat it too.”

Purpose

University is for most students ripe with potential for commemorations, pivotal experiences, new found independence, rebelliousness, sexual exploration and mobility. There is a universal characteristic to mark important events or celebrations in some ritualistic manner. The gastronomic author, Margaret Visser writes “celebrations of coming together, of marking transitions and recollections, almost always require food.”

The subject of this paper is an Australian collaborative first year Interior Design and Architecture course. The teaching methodology exploits the richness and diversity of individual student identity and marks their rites of passage as initiates in the design realm with celebratory projects. It uses recollections and experiences of place and as a cumulative pedagogical device. In addition, it uses a strategic alliance with food as an appropriate metaphor and tactic for the teaching of design.

“Beyond the power food exerts over individual memory is its fundamental status as a manifestation of collective beliefs and cultural significance.” Its universality and accessibility in these respects makes it an innovative and effective agent in cross cultural teaching, as an aide memoir on both a personal and communal level, “because a taste and smell is rarely lost; and tastes and smells which we have known in the past recall for us, as nothing else can, the memories associated with them.”

Just as the interior designers’ task is to make memorable places, our fundamental goal is to make learning a memorable experience. And as the profession of interior design celebrates its maturity and hard won legitimacy, we recognize culturally significant behaviour as an essential part of design education and a means to extending theoretical and research bases.

Rather than commence design as an exercise in ‘otherness’ or virtual experience, the practices we employ reconsiders the everyday as a sensual celebration, and sites projects in quintessential Australian environments.

Norman Mommens writes, “it is through celebration that we become part of what we perceive.” The non-negotiable aspect of our approach is the genuine experience of space in lieu of the virtual. Beginning design students, if they are to resist what has been described as the “reductive non participatory threat constantly present in the electronic media and all forms of simulation” need to feel directly the total sensory stimulation involved in perceiving a place, and recognise themselves and their previous spatial experiences as part of that sensing. An argument is made for the intelligent mediation of the computer in design education.

Methodology

This paper will expand upon these ideas and extensively illustrate with slides their application, both inside and outside the campus walls. It presents philosophical approaches and specific applications of a cumulative series of projects which constitute a single first year interior design course.
Summary of Results

The success of these projects will be reviewed based on observation and reflection and through presentation of the program and products of the studio with approximately 40 pairs of slides.

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WHAT ABOUT THOSE FIRST YEAR STUDENT EVALUATIONS?

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Purpose

Faculty at most universities are required to submit student evaluations for retention, tenure, and promotion. It is unlikely this will change because they are an important assessment tool for individual faculty and for programs. Faculty will be learning more about the learning process. Universities are recognizing this and many have begun Centers for Teaching and Learning and offer symposia on the subject. This paper will explore reasons why faculty who teach design get negative comments in student evaluations, especially those done by first-year students. It is important to note that this exploration will be done by someone with subject matter specialty background; not an education-based background.

Process

When a semester is finished, faculty often go through a personal process of evaluation of their teaching. When the student evaluations are distributed to faculty after the completion of the semester, faculty can be amazed, angry, disappointed, and/or puzzled by student comments that say, "We had to do everything her way," or "This class did not allow for individual creativity." These negative comments are then accompanied by low evaluations. What went wrong? Why haven't the students seen their progress?

After participating in a series of symposia geared to address teaching first-year courses, it was learned that there might be a reason for getting negative student evaluations.

Kloss (1994) and Perry (1968) write that that to most effectively and efficiently promote learning, faculty need to know something about how our students - and indeed how we ourselves - learn. Kloss (1994) describes the stages of learning as dualism (learning facts and recapitulating them on demand), multiplicity (all opinions are valid), relativism (when students learn to weigh evidence), and commitment in relativism (when students begin to own their knowledge and move to critical thinking).

Of special note, is the second stage, multiplicity. This is where first-year students get stuck. Students have not learned to take responsibility for their work. When students learn how to defend their work in a logical way, learn to argue positive points and negative points, consider alternative solutions, and see that there are several answers to a problem, they will move on to the next stage, relativism.

Summary of Results

First-year students need to see and evaluate a wide range of work verbally and in writing in order to move from the multiplicity stage. Kloss (1994) and Nelson (1998) give excellent aids for this development. Illustrations and handouts will be used for discussion.

Understanding the stages of learning help us better evaluate our teaching and programs of instruction. Maybe, this second stage is where first-year students should be in the freshman year of study in the program. If so, this needs to be understood by evaluators of the faculty for retention, tenure, and promotion. It also needs to be understood that we teach in a major that requires criticism, questioning evaluation of personal work and that of our environment. This is a challenge.

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TALES FROM THE TRENCHES: PRACTICAL GUIDELINES FOR THE CREATION OF COMPUTER-BASED INSTRUCTION IN INTERIOR DESIGN EDUCATION

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University of South Florida

Issue

Growing numbers of conference presentations and publications demonstrate that computer-based instruction is beginning to be created by design educators. This phenomenon has occurred as increasing attention is paid to distance education methods and technology (Martineau, 1995).

Design educators may possess a potent advantage in their sense of artistry and their experiential knowledge of useful teaching strategies as they plan their computer-based instructional products. As these products grow in complexity, it may be useful to examine planning strategies and examples from instructional technology, a field that is exclusively dedicated to understanding what does and does not work in computer-based instruction (or CBI). Practical issues such as the mechanics of the design and development process, typical costs, and production issues are helpful points of discussion that could assist design educators in their endeavors.

Methodology

A useful framework from which to examine the practical issues of the design of a CBI product is the Instructional Systems Design Model (Alessi & Trollip, 1991), a development procedure with steps similar to the design process interior design educators are very familiar with.

Analysis. A great number of decisions must be made as the CBI development process begins. First, does a need truly exist for the instructional content to be conveyed via a computer? Compelling reasons might include a mobile or distant student population or other factors. Conducting a cost analysis estimates time and funds required and an investigation of the target student’s characteristics is necessary. Similarly, the environment within which the product will be used must be addressed, including computer platform, speed and power of available computers. The educator must also assemble a design team at this time. Choosing an instructional strategy such as tutorial, simulation or game format is yet another decision that must be made, and a host of pros and cons of the various possibilities will influence choices.

Design. The analysis information is then processed for translation to a computer product.

Among the many tasks here, flow charts are created that indicate the general structure and procedure a student will encounter in the product. Also completed are the more specific storyboards, documents that detail text, graphics and all other elements that are visible on each screen.

Development. Using the flowcharts and storyboards, graphics and other multimedia elements are created. The resulting parts are then assembled and programmed to result in a physical, testable product.

Evaluation. Assessment of the product (much like the design process’s post-occupancy evaluation) in conducted both in ongoing fashion throughout the development process and summatively once the product is complete.

Summary

If it is well planned, education futurists suggest that CBI instruction will likely continue to play a role in curricula. Student demand for choices may cause education organizations to yield to a system of ‘a la carte’ degrees, where students can choose the content and source of their information (Gooler & Stegman, 1994). This suggests that CBI instruction may be attractive if
offered in 'module' stand-alone format, an approach that would also suit professionals seeking continuing education credit.

References


DIGITAL TECHNOLOGY AND RELATED PEDAGOGY: REDEFINING THE INTERIOR DESIGN STUDIO

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Purpose

This paper discusses the efforts of an interior design faculty group in rethinking the design studio in regards to the impact of digital technologies and related pedagogy. It is hoped that the discussion of these issues and their possible solutions will assist other programs in making a more efficient evolution towards integrating digital technology in the design classroom.

Methodology

The major thrust of the workshop involved the discussion of current trends in technology including CAD, student computer requirements (Case & Matthews, 1999), virtual resource libraries, computer modeling, and virtual reality. Next, scenarios based on these trends that describe a typical day for a student or teacher were given to the faculty group. The group considered three separate scenarios that stimulated thoughts from restructuring the curriculum to renovating existing studio facilities. The faculty then made decisions on how the program should proceed in the next decade including possible redesign of studios, CAD lab, resource libraries, and teaching methods.

Scenarios

The following are three potential scenarios particular to our program. It is likely that most programs will encounter these same scenarios in the future. The end of the workshop resulted in three different design solutions. Each charrette proposed to modify our curriculum’s structure as well as renovating existing studio spaces.

1. Virtual Home Studio Scenario
Description: Students work at home on projects and come in only for group critiques, help sessions, team sessions, and presentations; communication between peers and faculty is done mainly through the internet; some workstations for animations or virtual reality will remain in the classroom.

Implications: Students will not have help from fellow students on site; facilities would be composed of many critique or teamwork spaces; decrease in studio spaces may free up resources that can be used in other areas.

2. Hotelling Scenario
“It is likely that students will someday soon walk into our classrooms carrying their own super-computers” (Dyrl, 1995).

Description: Laptops are recommended to all; transfer students with home desktops may be accommodated by a limited number of workstations in each studio; most work will be done in studio; board and handwork to be accommodated in resource rooms similar to design firms.

Implications: Requires rewiring for studio spaces and new ergonomic furnishings for comfortable laptop use; modifications to the space necessary for academic level designated studio spaces.

3. Hot Desk Scenario
Description: Each student has their own workspace with power and space for both laptop and handwork; all designing would be done in the studio.
Implications: Security problems with unoccupied workstations; unfeasible renovations to existing studio spaces; transfer students will likely have desktops.

Summary

The workshop was invaluable in that it brought the faculty together to effectively discuss the impact digital technology has and will have on our program. It also helped the group focus on how to take an active role to better integrate digital technology in the future. The resulting three design charrettes varied from minor cost to some major renovations. Although all illuminated a fresh light on the matter, the present decision is to synthesize all three designs into one.

References

MAKING GREEN CONNECTIONS: CULTURE, DESIGN & TECHNOLOGY

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Purpose

In the summer of 1999 a group of undergraduate interior and graphic design students traveled to the United Kingdom to explore current uses of green design. A component of the course outline required students to communicate with the home university using the internet to send text and images of daily activities for downloading to the program website. The combination of the two activities broadened the scope of student learning activities and added relevance to their travel experience. The presentation will include: an update of Green Design practices in the United Kingdom; a methodology for planning this type of experience; and a trouble shooting guide for using technology in other countries.

Methodology

Background. The focus of the course developed as a result of an effort to broaden the relevance of course content related to environmental issues. By combining foreign travel with contemporary design information, research, and technology the students were able to experience this information through personal interaction with design professionals and students from a different cultural and philosophical viewpoint.

Green design in the United Kingdom. The use of common language facilitated the choice of the United Kingdom as a basis for study of green applications. Travel included London, Bath, and York in England and Edinburgh, Glasgow, FIndhorn and Dundee in Scotland. Design Resources a green construction resource in London provided a wealth of information through displays and presentations. Students were also required to note green design uses in their daily activities and tours of traditional sites. Findhorn, an ecological village located on the north coast of Scotland provided an active learning laboratory of green practices.

Making connections. A concentrated period of time was spent using facilities provided by The University of Dundee at the Dundee Center for Contemporary Arts. Sources for green visits and directions were identified through traditional research methodologies. Contacts were made through the post and electronically.

Using technology on a different wavelength.
The use of the internet for regular visual and text communication with the home university added another dimension to the course content. Faculty and students used laptop computers, internet cafes, and university facilities to process the transmission of digital and text files.

Summary of Results

As with any new experience there were both problems and successes. Site visits were uniformly successful and provided more educational content than anticipated. Technology provided the most frustration but still provided the desired communication connections. The opportunity to learn and utilize emerging methods of professional communication was a positive addition to the traditional aspects of foreign study. Universities in the United Kingdom are eager to develop connections with schools from the United States and the participation begun with this study tour will continue with faculty and student exchanges and return student visits.

References


SUSTAINABLE INTERIOR MATERIALS DESIGN GUIDE

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Purpose

A design guide and rating system for sustainable nonresidential buildings was developed. This presentation discusses the process used to develop the Design Guide and demonstrates the Interior Materials section of the Guide.

Background.

Clients and the designers may be highly motivated to create “sustainable buildings,” but they are faced with a number of daunting challenges when they begin an actual project. First, “green” or “sustainable buildings” have many definitions. Second, there is an overwhelming amount of information on the subject that is either too time consuming to sift through or too fragmented to understand as a coherent whole. Third, while there are already excellent green building rating systems available, they focus more on the strategies and less on the process required to make them work on an actual project.

Methodology

In response to these problems, an interactive, Web-based site, the Sustainable Design Guide, was developed by an interdisciplinary team that included building researchers, architects, interior designers, and landscape architects. Unique features of the Design Guide are its numerical rating system that reflects a design team’s sustainability attitude, the education component of each layer, and its accessibility over the Internet. The Interior Materials section was completed by interior designers.

Summary

The Sustainable Design Guide is intended for the design, construction, and operation of both new and renovated facilities. The system provides approximately 50 strategies that are organized according to several categories of design issues—site, water, energy, indoor air quality, human factors, materials, and waste. Quantifiable performance indicators are used whenever possible; however, less tangible, immeasurable, and even developing areas of sustainable design are also rewarded. As the knowledge base of the profession grows the performance indicators will be modified and updated. Each strategy listed for a particular
topic such as Materials can be selected to reveal more detailed information. Individual strategy pages show the purpose, performance indicator, and a list of actions required for each phase of the process. For each strategy specific guidance information includes reference material, contract or specification language, and even case studies of successful examples.

The system is organized into the phases of the design process. In addition, a checklist of actions required during each phase of the process is available. Each strategy is awarded points based on meeting a specific performance indicator. Points are distributed among the strategies based on the perceived environmental and human impacts as well as priorities of the building location.

The Materials section is divided into site, structure, envelope, and interior with strategies based on the material's stages of the life cycle. The interior materials section and its development are the focus of the paper.

Conclusion.

The project is envisioned as a dynamic and evolving system. It is intended to grow, change and be applied to a broad range of public and private sector projects. The intent is also to create a database of all projects using the Design Guide that will contribute to the evolving sustainability and design knowledge base.
WEB BASED DESIGN

Lura Teter Justice
Eastern Kentucky University

Purpose

The purpose of this presentation is to acquaint the interior design educator with current sources of interior design information available on the World Wide Web and to forecast the use of futuristic web technology into the field of interior design. The participant will come away from the presentation having "visited" several popular interior design web sites and explored their application in the interior design field. Projected directions in web technology and its use in other areas will be related to its potential use in interior design applications.

Process

In the computer-projected presentation, the presenter will illustrate the design office of the future. An interior design professional is envisioned sitting in his or her office with a three dimensional design of an office illustrated on a computer screen. Accessing the world wide web, the designer will "browse" the major office furniture manufacturers' web sites and download scalable three-dimensional models of the office furniture desired. Further browsing of manufacturers' web sites will lead to options such as textiles, color choices, and finish selections. These various options may automatically be viewable on the model in the three dimensional office the designer has created. While at the manufacturers' web site, the interior designer may also connect specification information to their drawing and research code compliance in their specific application. After "linking" to the various manufacturers' web sites, and finalizing the drawing's component choices, the interior designer then uses the database linked to their drawing to generate a purchase order for the components and materials needed in the design. The interior designer will then "launch" an interior design "Bizbot". The "Bizbot" is an automated business specific search engine. The "Bizbot" will then send the purchase order to all interior design suppliers capable of procuring any or all items in the purchase order. The "Bizbot" will evaluate items that are on fixed price contract and solicit those items that might be purchased at variable prices. Returning to the end user, the "Bizbot" will report on the best bids to be found concerning the materials desired.

Summary of Results

The seminar participant will come away with a review and analysis of current manufacturers' web sites. Information will also be provided for how these web sites are currently being expanded to be more useful to the interior designer. It is anticipated that future applications such as the "Bizbot" will become a valuable tool to the interior design professional.

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ENHANCEMENT OF A COLLABORATIVE INTEGRATED DESIGN STUDIO THROUGH DISTANCE LEARNING

Virginia North
Lawrence Technological University

Mary Sterling
Indiana State University

Sandra Ellis
St. Clair College

Purpose

The purpose of this presentation is to discuss a design studio course that integrated interior design, architecture, and lighting design, and applied distance learning methods, so that universities in two different countries could collaboratively offer the course. The process and methods applied in development and delivery of the course will be demonstrated.

Background

Technological integration in education has allowed development of methods for delivering education to students who do not necessarily have to physically be present on a university campus where the education originates, thereby creating a distance learning experience.

One method often applied in distance learning is asynchronous learning networks. To increase success of this method, students must eventually feel like insiders rather than outsiders within the network (Wegrip, 1998). Full participation in the method and high interactivity allow students to move from peripheral status to central status (Lave and Wenger, 1991). It has been found that asynchronous conversations on-line support more social interaction than face-to-face communication because there is greater control of the communication (Wegrip, 1998). More students are able to participate when there are asynchronous on-line discussions (Tuoffi, 1997). However, student needs and convenience must be addressed or students will not have a positive reaction to distance learning (Fulberth, 1998, Cini and Villic, 1999).

Process

Collaboration in teaching integrated design studios, between two universities from two different countries, became possible through application of both synchronous and asynchronous distance learning methods. Technical lighting information typically presented through lectures could be presented more effectively by one university in synchronous video transmissions to students at both universities. An instructor from one university gave lectures in a distance learning classroom to eighteen students while transmitting to twenty-five students at the other university. Students at each university were able to speak to each other and be seen through desktop video/audio devices. Additional communication and information such as exam study guides were provided through a web site and asynchronous bulletin board within a course software package, WebCT. Both schools conducted their own lighting design studios in conjunction with other disciplines in integrated studio format. Students typically spent fourteen hours per week in studio and lecture sessions that supported development of a site, building architecture, interior design, and lighting design. Faculty worked individually with groups of students as well as collaboratively to support project design development. Students provided input at the end of the semester on the
effectiveness of this course through a questionnaire.

Results and Implications

Student work from both universities indicated improvement in lighting design over past performance at this level. Since this was the first experience for either university using distance learning in a studio course, changes were made as problems arose. Results from a questionnaire given to students from each university who participated in the distance learning part of the course revealed that students who used asynchronous communication through WebCT gave the course higher ratings than students who did not use WebCT. 50% (N=14) of the students who used WebCT rated the course as better than others they had taken while 46% (N=13) of those who did not use WebCT rated the course as worse than others they had taken.

References

INTERIOR DESIGN COMPATIBILITY CRITERIA FOR ADAPTIVE REUSE

Catherine Howell Latvala
Brenda Carlisle, ASID
Colorado State University

Purpose

The importance of the preservation of interiors is well established in the literature (Ramsey Leimenstoll, 1988; Seale, 1979, Fisher, 1988). Research about design compatibility for the adaptive reuse of interior spaces in historic buildings is less adequately addressed. Criteria are needed for designers who wish to create a compatible interior space in an historic structure, without creating an historic "period" interior. This presentation will propose nine criteria for audience evaluation. Through facilitated discussion and a slide presentation, the audience will be asked to test the accuracy and applicability of the criteria in a variety of interior spaces.

Process

In the review of literature, research was found that addressed design compatibility issues for interior spaces in adaptive reuse projects on a case-by-case basis (Closs & Mitchell, 1988), but general guidelines for interior design compatibility in adaptive reuse projects are lacking.

The historic preservation discipline has developed an appropriate framework to use as a model for establishing interior design compatibility criteria for adaptive reuse projects. The Savannah Plan (United States Department of Housing and Urban Development [HUD], 1978) is a well-known historic preservation design compatibility program consisting of 16 criteria addressing the design of new buildings in a particular historic district. Criteria developed as a result of this plan have served as the basis for many city plans throughout the United States; such as the design compatibility guidelines for historic preservation in the Rocky Mountain region (Wheaton & Albright, 1979).

The criteria presented in the Savannah Plan were examined and evaluated to for applicability to the interiors of buildings. When analyzed in relation to the principles of design (as presented in Kilmer & Kilmer, 1992), the 16 criteria essentially addressed rhythm, proportion, scale, unity/harmony, and variety. When viewed as applications of design principles, the Plan criteria were then modified for interior environments.

Nine criteria resulted from this analysis relating to the four design principles.

These new criteria are intended as a starting point for discussion and further research. Some criteria may be more vital than others in the creation of a respectful design. In application it may be discovered that a minimum number of criteria are necessary to assure a compatible interior space as was decided by the author’s of the Savannah Plan (HUD, 1978).

Summary

These interior design compatibility criteria are intended as general guidelines which serve to provide a framework for the development of an interior space that will be harmonious within the site. The strength of this presentation lies in its use of another discipline's model, adapted for interior design use. The criteria also are related to fundamental design principles, thus the resulting new criteria have relevance for both interior design and preservation professionals as they are grounded in the basic tenets of both disciplines.
References


CELEBRATE PLACE IN DESIGN EDUCATION AND RESEARCH: AN ENVIRONMENT-BEHAVIOR ASSESSMENT OF A HISTORIC NEIGHBORHOOD AND ITS RESIDENTS

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Christner, Inc.
Clayton, Missouri

Purpose
Designers and researchers continually seek to understand, recreate, and celebrate place. This study examined the personal characteristics of the residents of an urban historical neighborhood and their attitudes, values, and attachment to their residential dwelling place and surrounding neighborhood environment. It was anticipated that a thorough understanding of place attachment would empower designers with tools and interests to create places that enhance the quality of life for the user.

Methodology
An action research utilizing case study research design and survey questionnaire instrument was employed. Descriptive statistics, factor analysis, and Chi-square analysis were used for data analysis.

Research Questions:
1. What are the common characteristics of the residents?
2. Why do the residents choose to live in the Swan Lake neighborhood?
3. Are the residents attached to their dwelling place and surrounding neighborhood?
4. How is the residents' attachment to their dwellings and neighborhood manifested?

The Neighborhood: The neighborhood selected for this research was zoned for historic preservation. It is located in the downtown of an urban center. The neighborhood supports a variety of residential options, and is in close-proximity to commercial, religious, and educational facilities.

Results and Discussion
Emerging patterns of what the respondents valued, and what they rated as important are illustrated below.

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Comfort, security *, **</th>
<th>Community</th>
<th>Diversity</th>
<th>Economics</th>
<th>Emotion</th>
<th>History *</th>
<th>Location **</th>
<th>Memories</th>
<th>Nature **</th>
<th>Uniqueness *, **</th>
</tr>
</thead>
<tbody>
<tr>
<td>* &gt; 90% of respondents ranked as important</td>
<td>** &gt; 20% of respondents indicated value</td>
<td>All others indicate a more than 50% importance/value.</td>
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Common Characteristics of Residents: The typical resident of the neighborhood is:
- Caucasian woman (56%) or man (44%)
- College-educated
- 25 and 34 years of age
• Owns her/his home
• Employed in a business-related field
• $30,000 to $49,999 household income
• No children
• Lived in other states, other cities, and other neighborhoods
• Lived in the city less than 10 years and in the neighborhood and in current residence for less than 5 years
• Has not lived in other neighborhoods designated or zoned for preservation
• Did not grow up in a home similar to current residence
• Lived in other neighborhoods similar in appearance and age to the current neighborhood

Manifestations of Environmental Perceptions:
Housing Choice
Housing choice factors included: comfort, sense of history and age, future value, and affordability. Valued housing elements were:
1) Location
2) Comfort
3) Uniqueness
4) Trees
5) Exterior space
6) Interior features
7) Architectural style

Manifestations of Environmental Perceptions:
Neighborhood Choice
Neighborhood choice factors included heritage and location. Valued neighborhood elements were:
1) Location
2) Trees
3) Lake
4) Neighbors
5) Architectural diversity
6) Residents diversity
7) Neighborhood personality

Place Attachment: A Place Attachment Index (PAI) was created to provide a summable index score for overall attachment to place. The PAI is compromised of three indicators: active place attachment, emotional place attachment, and variables such as length of residency, ownership, personality type, and self-image.

Summary and Lessons for the future
The built environment in which spaces are imbued with memories, emotions, and meanings become significant places for users. Places impact an individual's sense of self, sense of safety, sense of comfort and satisfaction. This study crucially illustrates place and place attachment impact on design, preservation, revitalization of urban areas, and overall growth strategies.

References


FOCUS GROUP RESEARCH: NOT JUST FOR POLITICS ANYMORE!

Nancy G. Miller, Ph.D.
West Virginia University

Kerri Keech, Ph.D.
West Virginia University

Purpose

The research conducted within the field of interior design is rapidly changing in both amount and classification. As the 21st century approaches, the discipline has become increasingly valued and the need for empirical inquiry has mushroomed. Traditional quantitative research methods are not always appropriate to interior design research, thus, the researcher must cast about for suitable qualitative methods. Focus group research is uniquely suited to examination and investigation conducted in the field of interior design. While the public may think of using focus groups only for political or marketing purposes, it is a low-cost method of inquiry generating robust data for the identification of major themes within the field of interior design.

Methodology

A large portion of interior design research is not easily reduced to quantitative numbers. Conversely, qualitative research allows the interior design researcher to explore and discover phenomenon that apply to the near environment. A focus group is a carefully planned discussion designed to gather perceptions in a defined area of interest. Focus groups are useful in obtaining specific data about meanings and experiences that would be difficult, if not impossible, to obtain using other methods of qualitative data collection within the phenomenological paradigm.

Focus group discussion is particularly effective in providing information of a qualitative nature about why people think or feel the way they do. The relevant advantages of utilizing focus groups in research include:

1. Socially Oriented Research Procedure — allows for interactions of individuals,
2. Flexible Discussion Format — explore unanticipated issues,
3. High Face Validity — presents results in lay terminology versus statistical charts, and
4. Time and Cost Efficient Process — provide richness of data at a reasonable cost.

Uniquely appropriate for interior design research, there is some skepticism within the research community regarding the credibility of the relatively new area of qualitative research. The credibility issue depends on three distinct but related inquiry elements:

1. Rigorous techniques and methods for gathering high-quality data that is carefully analyzed with attention to issues of validity, reliability, and triangulation;
2. The credibility of the research which is dependent on training, experience, track record, status, and presentation of self; and
3. The philosophical belief in the phenomenological paradigm, that is, a fundamental appreciation of qualitative methods, inductive analyses, and holistic thinking (Patton, 1990).

Summary of Results

Careful use of focus group methodology (Krueger, 1994) can provide interior design researchers with a valuable tool in conducting phenomenological research. It allows the researcher to explore and discover concepts within the field of interior design that cannot be addressed with the use of traditional quantitative research design.
Audience Interaction. Participation in the presentation will include role-playing participant qualification (5 minutes), focus group discussion (5 minutes), and a conversation addressing the merits of this instrument for the field of interior design (10 minutes). The remainder of the time (10 minutes) will be open for questions and clarification of the process. Appropriate portions of a successful focus group proposal and a bibliography will be distributed at the end of the session.

References


TOWARDS A SOCIETY FOR ALL AGES PROJECT: A MODEL FOR INTER-COLLEGE COLLABORATION

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Scott Ageloff
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Other Panel Participants

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Lovejoy Duryea
School of Visual Arts

Susan Forbes
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Mark Karlen
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Purpose

Six New York interior design schools embarked together on a non-competitive, collaborative, Project with the goal of enhancing student sensitivity towards a global phenomena and issues affecting a major end user group. This Project was done in conjunction with the International Council of Caring Communities (ICCC), under the auspices of the United Nations International Year of Older Persons 1999. The target population was defined as persons of age 60 years and older.

An inter-college collaboration is an effective mechanism to enhance the education of interior design students. Important components to this pedagogical model are display of student work in an exhibition setting and student participation in a conference.

Process

The ICCC and the chairs of the six schools formed a coordinating group whose job was to outline the Project. Each school formulated design studio projects with a focus on aging and urbanization in a global/multicultural context. Outcomes of the project were an exhibition of the students’ work at the UN and participation in a conference organized by ICCC titled Towards a Society for all Ages, held February 1999.

The planning began one and one half years before the exhibition and one year before all the school’s introduced their projects in design studio. The complexity of accommodating the curricula of six schools in a joint venture was a challenge and the panel will discuss important decisions they made to facilitate the Project as well as the broad project guidelines.

The Project was executed during the Fall 1998 semester. It was launched with a mini-conference, where speakers discussed the seriousness of aging.

Student research was a large part of the process. It included interviews and code research. Students examined changes, both physical and emotional, that the older person experiences. Through their research they gained a greater understanding of how to design environments.
that compensate for the physical limitations, yet allowed the client greater movement and the ability to remain within their community.

This panel presentation will further identify the process used for the collaboration of different design programs and the format adopted by the schools to create an innovative and expanded learning experience. It will also present a brief slide show the student projects.

Summary of Results

This collaboration resulted in an exhibition of student work and participation in a conference, both held at the UN. Even though the Project was administered by the faculties as non-competitive there was an intensity of output by all the students because their work was to be displayed beside that of their peers from the other design schools. Participation in the conference further enriched the educational experience, enhancing the value of their earlier research. In March 1999, Interiors & Sources magazine published the Project, giving recognition to the students’ accomplishments.

The Project offered an extraordinary opportunity for a non-competitive collaboration. The panel feels this educational model of inter-college collaboration provides a viable mechanism to enhance interior design education. This Project has enormous flexibility, reinforces student research and is immediately applicable to other contemporary issues in interior design

References

USING LIGHTING DESIGN TECHNOLOGY TOOLS: CURRENT TRENDS IN EDUCATION

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Kean University

Paulette R. Hebert, Ph.D.
University of Southwestern Louisiana

Purpose

The primary objective of this research was to evaluate the current status of interior design educators’ utilization of various lighting technologies in colleges and universities. Faculty perceptions regarding lighting resources and its impact on teaching effectiveness were also part of the investigation.

Methodology

Digital technology is an exciting advancement impacting education at all levels. As design practitioners incorporate technology into their interior design practices, educators must also integrate technology into their curricula. Most design programs are concentrating on implementing AutoCAD, 3D CAD software, and the student purchase of laptop computers.

Educators at many institutions, public as well as private, are finding it difficult to contend with the financial demands required to remain competitive in the midst of the rapid pace of continual technological advancements. An already stretched budget may leave educators without much hope of acquiring additional lighting technology. Many interior design educators are, therefore, missing out on opportunities to acquire the many easy-to-use, inexpensive, software programs, and interactive tutorials that are readily available.

A review of the literature revealed that very few studies have been conducted which investigate interior design educators’ use of lighting design technology resources in their classrooms (Hedge, 1994; Kays & Hebert, 1999). The current research utilized a survey instrument which was sent to all IDEC members with a valid e-mail address or a valid facsimile address published in the 1999 IDEC Directory. A total of 323 surveys were delivered with a total of 79 members returning completed questionnaires.

Summary of Investigation

Based on survey respondents, lighting technology appears to have a mixed level of acceptance and use by IDEC members in their classes. More than one-half of the educators indicated that they have used some type of lighting design technology resource in their interior design classrooms on a “regular,” “often” or “very often” basis. Over one-half (54%) of the educators participating in the survey have utilized the Internet to search for lighting fixture information. Approximately one-third (37%) have used the Internet to access lighting manufacturers’ electronic catalogs. One quarter of the educators (25%) responding indicated that they have used lighting manufacturers’ (vendor produced) software. One fourth of the participants (25%) have also created lighting fixture schedules with the aid of lighting technology. A lesser number of educators (20%) have taken advantage of software for lighting visualization or rendering. Less than one-fifth (19%) of the survey participants have used commercially available lighting design software. Smaller numbers of educators have worked with the commercially available lighting design programs: Lightscape (11%), and Lumenmicro (4%).

Conclusion

Lighting design technology can be an important tool for teaching lighting design and can greatly enhance the interior design studios. Most IDEC respondents believe that use of lighting
technology mentioned in the survey impacts teaching effectiveness. But more than half of the respondents are still relying on hard-copy literature while only one quarter of educators are using lighting software for visualization or rendering and even less are using commercially available or vendor software.

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GAIT AND BALANCE IN OLDER ADULTS: A FLOOR COVERING FOCUS

Joan I. Dickinson
Auburn University

JoAnn L. Shroyer
Texas Tech University

Purpose

The purpose of this research was to determine the effect of selected residential carpet and pad on the balance and gait of healthy, community-dwelling older adults. The following research questions were examined:

1. Does selected residential carpet and pad affect postural sway among older adults?
2. Does selected residential carpet and pad affect the use of a hip versus ankle balance strategy?
3. Does selected residential carpeting affect adaptation to the loss of visual and/or somatosensory (pressure sensors in the feet and legs used to maintain balance) cues?
4. Does selected residential carpeting and pad affect gait among older adults?

Methodology

Twenty-five healthy, community-dwelling older adults served as the sample. Balance was measured using the NeuroCom Posturography machine. The balance machine consists of a forceplate that measures postural sway and balance strategy. Postural sway is an important measure because increases in postural sway have been positively correlated with falling. Balance strategy measures the use of hip versus ankle strategy. An ankle strategy is used for minor disturbances in balance, while a hip strategy is used for major disturbances in balance. If older adults rely on a hip strategy when standing on carpet, this would suggest that carpet makes balance control more difficult. Sitting to standing, standing to sitting, manner of turning, gait speed, number of steps, change in gait speed, and weaving were measured for the gait portion of the study.

Balance. A 36 ounce, 1/8 in. gauge, 100% nylon, solid, 1/2 in. cut pile carpet and rebonded polyurethane, six pound density, 7/16 in. pad were applied to the forceplate of the balance machine. Subjects were exposed to the Sensory Organization Test (SOT). Under SOT 1, eyes were open and the forceplate was stationary (baseline condition). Under SOT 2, eyes were closed and the forceplate was stationary (visual input absent, simulated entering a dark room). Under SOT 3, eyes were open and the forceplate was moving (somatosensory input absent). Under SOT 4, eyes were closed and the forceplate was moving (visual and somatosensory input absent). Postural sway and balance strategy were measured for three trials that lasted twenty-seconds each.

Gait. Subjects walked a 12'-0" gait course of vinyl tile and carpet (see specification above). This portion of the study was videotaped in order to increase reliability of this measure.

Summary of Results

Postural sway increased significantly on the carpeted balance machine during SOT 4. Only under these difficult conditions did postural sway increase for this group. The selected carpet did not affect balance strategy. The older adults in this sample were able to adapt to the sensory limitations by adopting an ankle strategy over the course of time. The only significant gait measure was gait speed. The older adults in this sample walked significantly slower on the carpet versus the vinyl tile. The results from this investigation suggest that the older adults in this sample had limited difficulty maintaining static or dynamic balance when standing or walking on the selected carpet.
REFORMULATING INTERIOR DESIGN

Anna Marshall-Baker
Virginia Tech

Purpose

The call for interior design to define itself as a research-based discipline is persistent and pervasive (e.g., Dickson & Whiteside, 1994; Hasell & Benhamou, 1988). Yet despite the call, few empirical studies have appeared (Zavotka, 1999). Perhaps the lack of research-based articles is reflective of a broader issue: that interior design has not successfully defined itself, and the call for research is a futile attempt at validation.

One way to validate the existence of a discipline, to solve its identity crisis, is through social-science type research, complete with scientific method and statistical significance (see Hasell, 1993). Numbers and research are hard to refute. Yet despite a paucity of interior design research, the profession continues to grow and the discipline to expand. Perhaps this is because the strength of interior design lies not in the social science piece, but in the design piece, in beauty, ornament, space making, and decoration (Hing, 1999; Kaukas-Brown, 1997).

The purpose of this paper is to reformulate thinking about interior design. Although this is not a new notion, this paper includes a rudimentary representation of interior design reflecting a unique, selective combination of design (art and architecture) and social science (psychology) developed from a review of the literature in each discipline.

Art, Architecture, Interior Design, and Social Science

Historically, interior design shared with art and architecture, a value for the interaction of people with the environment, with materials and interiors that existed for the purpose of touching, handling, caressing (Woodfield, 1996). Art and architecture, however, particularly in the early 20th century, began to devalue ornament and value design in a "pure" form, devoid of tradition or historical reference (Conrads, 1964; Lawson, 1984; Mahan & Vodvarka, 1992). The ultimate result of this shift in thinking was increased value upon art and design as object, as exhibition, rather than a meaningful interplay between people and their environments. The presence of the piece or the presence of the artist became the realization of art and design. Thus, the artist or designer, having removed the importance of any historical or traditional reference point, became "untouchable", unfazed by criticism. This kind of thinking was not embraced by interior design that continued to acknowledge the critical interface of people and environment.

It is social science that perhaps prizes the human/environmental relationship most. Social sciences encompass three philosophical views of human/environment interaction (Ford & Lerner, 1992; Lerner, 1986). An awareness of each model enables designers to realize underlying assumptions that make the design process linear and the work uninspiring, or the process probabilistic and emergent with dynamic results.

Conclusion

A re-evaluation of interior design may reveal that it is not the research-based discipline it is called to be, but a profession of practitioners whose foundation extends from the best art, architecture, and social science have to offer.

References


INTERIOR DESIGN SUPPORTS NATIONAL EDUCATION REFORM STANDARDS IN K-12: A CASE STUDY

Stephanie Clemons, Ph.D.
Colorado State University

Purpose

The purpose of this project was to link interior design with K-12 through support of the fine arts standard identified by the National Education Reform movement. This case study discusses a college, entry-level studio project presented by interior design students to three, third grade classes in a nearby elementary school. The introduction of the interior design profession, through the support of a skill standard, is a natural method of enhancing career awareness typical of that age.

Process

An interior design educator and eight students visited an elementary school to present to three third-grade classes a three-dimensional design problem. Two of the six identified components of a fine arts standard were addressed: communication and perception.

Each third grade class was formed into cooperative learning groups (Vogel, 1999). The design problem involved constructing a model using forty-four triangular and rectangular pieces of paper (Cuffman & Clemons 1992). The elementary students had recently completed a curriculum unit concerning space and orbits. Therefore, the structural model became defined as a “space station on a planet of choice” with the caveat that it must be designed from the “inside out.” A minimum of three levels and six spaces were required.

Summary of Results

Findings involved classroom behavior, application of design elements and principles, transference of information from curriculum unit to design solution and support of fine arts skill standards. Classroom behavior revealed respectful students who quickly assigned roles and tasks. Application of design elements and principles was strong. Manipulation of paper shapes was creative. Line, shape, and form were used to provide movement through adjoining spaces. Circulation within the structure was depicted with escalators, stairs, elevators, and poles.

The transference of information from the third grade curriculum unit on space to the finished design solution was unexpected. Structures boasted exercise rooms with trampolines to strengthen human muscles as a result of zero gravity. A space station on Saturn incorporated a force field to protect it from flying rocks. Issues of security and safety evoked the implementation of security cameras, alien detectors, missile launchers, telescope laboratories, control stations, and transport rooms. Unique features ranged from chemical rooms to sandboxes.

Teachers perceived the project supported the fine arts skill standard in both the communication and perception components. Students cultivated visual literacy through self-expression, used visual arts as a means of communication, and selected themes to express a variety of viewpoints and ideas. Elements of art and principles of design were expressed through problem solving and invention. Interestingly, one teacher requested that the design educator return the following fall to present the same design problem in support of the math skills standard involving geometry.

Supporting the fine arts standard is a logical way for interior design educators to become involved in K-12. It offers an avenue for sharing information concerning design to educate future clients and to develop awareness of the interior design profession during a period of student career exploration.
References


CHECKING CODES: THE NEW-FASHIONED MILLENNIUM

Thomas L. Houser
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Purpose

Interior design projects must address a plethora of concerns centered on building, life safety, and accessibility codes and guidelines. Educators routinely cover these in lecture and studio courses throughout their curricula. Students then apply this knowledge on projects with varying degrees of certainty. The challenge accepted here was to develop a self-check, computer-based system for students to demonstrate compliance with key elements of prevailing codes and accessibility guidelines.

Process

Identifying Challenges and Setting Goals.
Four basic challenges existed:
1. identifying which codes and guidelines to cover;
2. determining the most effective points in a project to tackle the issues;
3. deciding which computer-aided design customization tool best addressed each topic; and
4. devising ways students could document awareness of prevailing codes and guidelines.

Identifying the Subject Codes and Guidelines.
The initial choices of which codes and guidelines to address were foregone conclusions: NFPA 101 Life Safety Code, the Americans with Disabilities Act, and the 1988 Amendment to the Fair Housing Act. Determining the level of detail at which to address each was not so simple. The decision was made to develop evaluation tools for interior design/architecture-related issues only.

Determining the Project Point at Which to Address Codes.
Assuming that codes and guidelines should be an integral part of our design decision-making, the only time to approach each issue is when it first arises. For example, students address building use and occupancy square footage issues during either Programming or Schematic Design. They tackle fire-rated zonal cavities and demising walls during Design Development (Design Intent Documentation). They address building and interior access, circulation, and clearance issues throughout the project.

Choosing CAD Customization Techniques.
Developing the evaluation tools involved devising command macros, programming new commands, scripting dialog boxes, and developing extensive symbol libraries. Students could choose these tools through pull-down menus, toolbar icons, image selection boxes, or direct command line entries.

One command macro slides two tables apart for access, inserts a representation of a person using a wheelchair, and provides repositioning guidelines. One new command alerts the user that a designated wheelchair access corridor is too narrow for too long. One dialog box evaluates specific building use and classification considerations to determine occupancy limits and to compute required exit units. One symbol library includes standards for meeting ADA guidelines in restaurants.

Documenting Awareness of Codes and Guidelines.
Students maintained a compliance notes and drawing layer. On it, they indicated emergency exit routes, wheelchair turnarounds, and accessible entrances and pathways.

Summary of Results

Faculty members report that the software has had a positive impact on attitudes students have towards codes and guidelines. They also feel students demonstrate more proactive stances about these issues. Students report that the software helps them conform to standards and guidelines. They consistently express appreciation for the software because it is easy to
use and it nets interesting graphics for their portfolios.

References


DIMENSIONAL SHIFT IN INTERIOR DESIGN STUDIO: FROM PAINTING TO 3-DIMENSIONAL SPACE

Jinbae Park, Ph.D.
Miami University

Purpose

This study addresses the possibility of using paintings as efficient metaphors for producing 3-dimensional spaces. The purpose of this study is to 1) enhance the students' ability to recognize painting as a useful inspiration for developing their ideas in design 2) create unlimited, more sculptural shape of the space to achieve ideal aesthetics. This poster presentation will graphically illustrate the development of the whole process of the design studio; from the paintings which students have chosen and simplified architectural drawings they have drawn from the original paintings, to the pictures of their rough study models and final models for the projects. Through this studio process, we could have the possibility of creating a new space as well as selecting inspirations and applying them to the design projects.

Process

The studio project was implemented in the spring semester of the freshmen year. Each student was asked to select one painting from Cubist or Abstract paintings because those style paintings are easily accessible for dimensional changes. Students were addressed lectures about the brief history, theory and characteristics of Cubism and Abstract paintings. Students are also informed about the basic ideas, concepts of time and viewpoints, and composition of the paintings with their relations in the plane. They became to investigate the paintings according to the basic elements in painting such as shape, color and texture, direction and depth, etc. After fully interpreting the painting, they could derive major directions that will guide them to create 3-dimensional space from the paintings. Following the directions, they initiated the process of changing and simplifying the paintings into architectural drawings. Based on the architectural drawings, they made rough study models. In this process of drawing and modeling, they decided the overall shape of the building and divided the space according to the major lines and composition of the painting. The size, shape and height of each room and space are decided following each original part of the painting. Through the repetitive works of making models, 3-dimensional spaces are created from the original 2-dimensional paintings. The final models show each and every part of the painting that is transformed into the 3-dimensional object or room. Exhibition of paintings, drawings, study and final models presents the whole process of design; a new method of interpretation and transformation of the space.

Summary of Results

Through the development of this innovative process, fundamental understanding of the painting has been brought to the students. They became to understand that 2-dimensional paintings could be successfully used as efficient metaphors for creating 3-dimensional spaces. This process was beneficial for students to recognize the sense of the space. After finishing this exploring study, their skills of developing aesthetic 3-dimensional space have been enhanced. Students had an opportunity to extend beyond functional and economic limitation, and as a result, they produced very creative spaces they have never imagined before. They also acquired a future design solution of selecting metaphors as a good design source. This process should begin in the early year of the studio program to offer students the possibility of extending inspiration about the design sources.
HISTORIC ARCHES: "BUILDING" A CONTEXT FOR HISTORY

Eric A. Wiedegreen
Virginia Tech

Purpose

The project upon which this poster presentation is focused was part of an on-going evolution of projects designed to introduce first year level, basic design students to classic historical periods and styles. Student teams researched historical styles and created large-scale arches using non-literal interpretations of the assigned style. The arches were set up in an open atrium over a three-day period for public view. The purpose of the project was four-fold:

1. To have students apply basic design principles and elements to three-dimensional problem solving.
2. To have students research, synthesize and interpret historical and contemporary idioms in non-literal terms.
3. To have students deal with the structural consequences of full-scale construction.
4. To have students experience group dynamic.

Process

Working within a 10-day timeframe, three or four person student teams designed a self-supporting arch as it might have been conceived by renowned designers or within critical design periods of the past and present. Basic research was required to establish the design elements/concepts characteristic to the assigned period. The project had to use the design vocabulary established in class to interpret the historical elements. The student task was to represent the historical period non-literally, showing the essence of the designer/period using materials at hand.

Particular designers/periods were chosen for the clarity of design idioms, access of information for student research, and the overall learning experience for exposure to historical periods (a broad range, ancient to contemporary.) Experience has shown that while many historic styles may be of vast importance (e.g.: Greek Revival), they may not all lend themselves to a non-literal interpretation without losing clarity.

Each arch had to be self-supporting and incorporate an opening of at least 4'-0" (w) x 6'-8" (h). There was no limit to the overall height of the arch construction. Any material could be used and color and texture were useful tools in creating successful solutions. Internal structure was a factor for such large-scale constructions. Teams were required to incorporate the assigned historical period (example: ART NOUVEAU) and the name of each team member within the design using a typeface which reflected the historical period. These letters could be either three-dimensional or simply drawn or painted on within the context of the arch design and historic style being explored.

Aside from the full-scale arch, each team was required to produce a single, organized board with critical visuals of their assigned style (for purposes of class discussion), and a preliminary study model (suggested scale: ¼" = 1'-0").

Summary

This historic arch project was well received by both students and viewers alike. An important aspect of the project was the experience with group dynamics. All aspects of the project required a united team effort (from idea generation, to finances to division of labor.) This was often the first opportunity for students to build with construction materials on a scale far larger than normally encountered at any level of study, allowing them to actually impact the physical environment and giving them a brief taste of the "power" of interior design.
VIRTUAL TEXTBOOKS: CREATING A SPECIALIZED TEXT FOR INTERIOR DESIGN COURSES
Jennifer D. Webb, Ph.D.
University of Arkansas

Purpose

Textbooks that are flexible and comprehensive are required by today's complex design problems. The Information Age has resulted in rapid dissemination of new knowledge and enables the creation of a text with the range and depth of information necessary for comprehensive and creative design solutions. The purpose of this poster is to provide a process for conceptualizing, creating and maintaining a virtual textbook for a variety of interior design courses.

Process

The initial step in creating a virtual text is developing a clear and comprehensive concept for the course and the text. Class projects and objectives must be developed well in advance of text preparation. Additionally, the students and their critical thinking skills should also be considered in the selection of on-line materials.

Once the objectives are defined, one can become overwhelmed by the material available on the Internet. Keyword searches must be refined to obtain relevant information. Sources may include companies, professional organizations, and government or educational institutions. Sites established by corporations and communities provide client profiles for projects and add depth to course material. A variety of sites allow students to study regions in the US and abroad, enhancing their understanding of cultures and user needs.

Access to sites must also be considered and there are two different issues to consider. First, the course instructor must decide how to distribute information and links to the desired locations. Electronically, a course home page with links directly to readings can be created or a distance learning software package can provide a template. Paper distribution is less successful because of the need for continual maintenance. The second issue concerning access concerns the type of site. Some sites are considered public domain and access is open to all while other are restricted to members (professional organizations) or subscribers (on-line catalogs, journals and databases) and are fee-based.

A final concern with virtual texts is the need for continual verification and correction. Web sites change frequently and a web page must be updated throughout a semester. Some sites are habitually inaccessible and students must be instructed in advance that materials may not be accessible immediately prior to deadlines. Other sites require indirect links and significant drilling down to reach the desired material. An electronic format that is easy to update is necessary.

Summary

Creating a virtual textbook allows great flexibility in course design. Benefits include reduced duplicating expenses and copyright infringement concerns and may reduce textbook expense for the student. Virtual texts also have environmental benefits. Students may also realize the importance of current and ongoing project research. The process for creating a virtual text will allow each instructor maximum creativity in designing unique and challenging problems and adequate resources for the solutions.

Presentation

This poster will provide a summary of the development process and illustrate graphically several different types of textbooks. Green design, regional/cultural studio, and materials courses will be illustrated. Examples of Internet homepages linked with daily reading
assignments and reference materials will provide hands-on experiences.

References


DESIGN EXHIBITS: AN INFORMAL LEARNING OPPORTUNITY

Daniel C. Beert
University of Kentucky

Purpose
The purpose of this poster is to share with interior design educators the results of an active learning approach that served to introduce, review, and reinforce design theory, generating an informed dialog across curricular boundaries. The authors will bring a virtual tour of student chair designs from around the country, sharing the learning experience provided by a visiting exhibit of design competition entries. Competitions that fail to recognize the significant contributions of all entries ignore the learning value inherent in such a broad scope of concepts and creative interpretations. Moreover, giving exhibit viewers an opportunity to make meaning of their own involves them in an inclusive, ongoing discussion about the application of design theory (Falk & Dierking, 1992). Such an opportunity should be valued and shared by as many people as possible, bringing new life and meaning to the exhibited designs with each interpretation.

Process
Cooperative learning theory recommends discussion groups to promote a feeling of membership and to generate an intrinsic motivation to learn (Johnson, Johnson & Smith, 1991). To promote such dialog, a cross-section of students from freshman to graduate level, representing interior design and merchandising students, toured an exhibit representing the work of 16 students from 13 American and one international design school. Students were asked to respond to questions about the entire exhibit and make comparative judgments about the individual chair designs. The responses were used to generate class discussions, involving the entire curriculum in the dialog.

Undergraduate student questions related to personal preference, structure, ergonomics, presentation, model-making, creativity, and the elements and principles of design. Graduate students participating in a seminar on creativity were asked to rate which chair was most functional, aesthetically pleasing, or creative and provide a rationale to support their opinions.

Summary of Results
Graduate student ratings hint at a consensus on the most functional chair design, moderate agreement on creative application, and little agreement on aesthetic preferences. Some students used sketches to support their analysis.

At the freshman level, the questions served to introduce students to design awareness issues and principles and elements of design. Other undergraduates had an opportunity to review and reinforce their knowledge and awareness of design theory in an applied manner.

This is the first use of this method to take advantage of such exhibits at this school. Wider use and greater involvement across the curriculum are planned for subsequent exhibits. For instance, creating discussion groups across academic levels would create a greater sense of community among design and non-design students. Having a gallery opening to celebrate all of the entrants would make the event more inclusive. Placing comment cards in the exhibit would encourage visitors to provide opinions or reflect on what meaning they make of the designs presented. This informal learning approach has been used to great effect in many museums to promote visitor involvement and to gather formative and summative data about the effectiveness of their exhibits (Falk & Dierking, 1992).

A poster and virtual tour (via Powerpoint), along with comment cards, will give the audience a chance to add their own meaning to the exhibit.
References


THE GLASS HOUSE REVISITED: AN INTERACTIVE AUTOCAD TUTORIAL

Daniel C. Beert
University of Kentucky

Purpose
This poster demonstrates an on-line AutoCAD tutorial developed for a beginning visual communications course, using Philip Johnson's Glass House as a model. As first produced, students received the instructions in a multi-page paper document and completed the drawing independently using basic two-dimensional drafting skills. While students have followed the instructions and completed this model satisfactorily, the lack of interactivity in this instructional format detracts from the potential learning value of such an exercise (Kristof & Satran, 1995). Creating a teaching space on-line offers a variety of learning opportunities (Hart, 1996) and allows the use of methods that relate to other aspects of the student's learning experience. (Kennedy & McNaught, 1997). Making the tutorial available in digital form allows students to access it from any computer via the Internet, navigate to any section of the instructions, look up command references, and view video demonstrations of the routines. In addition, the potential for linking text to relevant data sources makes this approach intriguing. Potential for adding other historic buildings to such a product exists through the development of tutorial templates which other design educators can complete, adding to a library of learning tutorials that cover more than AutoCAD skills.

Process
The author used AutoCAD to construct a floor plan of the house, stopping at key points in the process to document the instructions and make copies of each stage of completion. Screen captures of each completed stage of the AutoCAD drawing (figure 1.) are converted into Windows Metafile images so that the vector-based information and scalability are maintained. Next, the images are exported to Macromedia's Flash program, where animation and interactivity are added. From there, files can be compressed into HTML format for use on the World-Wide Web or "burned" onto a CD-ROM for archiving and network access.

Developing instructional multimedia is a difficult and complex activity (Nicholson & Ngai, 1996). This author has enlisted the aid of a campus resource center that specializes in instructional technology. The content specialist creates the AutoCAD drawings, writes the instructional content, and communicates possible visions of the final product to the instructional technology specialists, who write the software program and create the desired interactions. This is a true collaboration involving every member of the team in analyzing the learning outcomes, with the software becoming a tool for expressing the final vision.

Summary of Results
This prototype provides a means for content experts to add another instructional tool to their kit. A template for creating similar tutorials is under development as part of this project, making the task of programming the interactivity less of a burden. Testing of the completed prototype in December, 1999, will determine how easily other buildings can be adapted to this tutorial program. A brief survey will gather responses to the completed prototype during its demonstration at this poster session. Further steps include creating an improved prototype, distributing it to selected interior design educators for testing, and pursuing support for wider distribution of this and similar products.

References

A TOOL IS A TOOL IS A TOOL:
COMPUTER-AIDED VERSUS HAND-DRAFTED DESIGN IN THE STUDIO

Carol Bormann
Oklahoma State University

Purpose
Computer-aided design (CAD) has become more prevalent in design curricula. Students from design-related areas often learn to use the computer as a design tool. In recent years presentations relating to research and experimentation in CAD have become common at professional conferences. Opportunity for comparison of hand drafting and the computer as a design tool in a junior level Interior Design studio occurred when half the class was unable to complete the required CAD course during the fall semester. That spring, students used either hand drafting techniques or the computer depending upon their acquired skills. This provided the opportunity to observe two sets of students solving identical problems but executing their designs using distinctly different methods. The purpose of the study was to determine how these two approaches might affect the end results.

Methodology
Students who had completed the introductory CAD course could participate in the computer-aided design section. The section using hand drafting included those with no CAD experience and students less comfortable with CAD. The enrollment was equally balanced in number and each section had students of all skill levels.

The pretest took the form of documentation of the student's projects from the Residential Studio and Furniture Design courses taught the previous semester. Projects were copied and studied noting students' current levels of expertise. Student work from both lab sections was compared for functional solutions, attention to detail and creativity.

Observations
First phases of the restaurant design were submitted and evaluated. Computer-generated work was often more rigid as seen in the grid-like placement of tables and chairs. Solutions were very "readable" and included significant details but lacked creativity. The section using hand drafting tended to show more creativity in spatial relationships and architectural elements. But drawings lacked clarity of line and included fewer details. Drawings were critiqued, graded, and returned to the students for correction and resubmission.

At the end of the project, students submitted presentations including the revised floor plan, perspectives, elevations, materials and finishes. Rendering was completed using traditional techniques. Final projects were photographed and analyzed.

Conclusions
The quality of work and creativity in the final solutions varied according to students' abilities and their dedication to the task. As students progressed with the project, those using CAD became more comfortable using it as a tool throughout the design process, giving them the freedom missing in the first phase. The hand-drafted work was refined and necessary details added before submitting solutions for the final presentation. However, no distinct difference was found relating to tools the students had used. The best students produced the best projects regardless of whether they were in the computer or hand drafting section. Either tool, when mastered, could provide the student with the means to express their design concepts.

Presentation Format
The poster presentation will include a series of drawings showing a progression from the pretest phase through the conceptual phases and ending with the final rendered solutions. Each phase, the students' progress and the conclusions drawn will be noted in the presentation.
BUILDING CODES: RECOMMENDATIONS FOR CURRICULUM DEVELOPMENT

Betsy D. Dunham, Ph.D.
City of Grapevine Development Services

G. Marie Gentry, Ph.D.
Texas Tech University

Purpose

The purpose of this poster session is to make recommendations for developing curricula associated with model building codes. Model building codes contain procedures that encompass all facets of construction (Alachua County, 1997, July; Field & Rivkin, 1975). These codes are legal documents that supply minimum criteria to protect life, property, health, and public welfare by governing design, caliber of materials, and construction (Hutchings, 1998; International Conference of Building Officials [ICBO], 1997). All individuals need protection from fire and structural collapse in the built environment (Alachua County, 1997, July; Southern Building Code Conference [SBCCI], 1997, January).

"Code issues affect all designers—residential and commercial—as they determine the extent of the work of the interior designer relative to non-structural and non-seismic scope" (Dale, 1997, October, p. 92). Additionally, the Foundation for Interior Design Education Research (FIDER) (1996, January) has stated that interior design students should demonstrate competency in the area of code information prior to graduation. However, cases have been reported in which interiors not in compliance with building code requirements have been responsible for endangering the health, safety, and welfare of the public. Interior finishes were confirmed to be the principal cause of fires at both the MGM Grand Hotel in Las Vegas, Nevada in November 1980 and a fraternity house fire at the University of North Carolina in Chapel Hill in May 1996. The fires claimed 84 lives in the hotel and 5 lives at the fraternity house (American Society for Testing & Materials [ASTM], 1997; Isner, 1996). Consequently, methods of incorporating building codes into design curricula were investigated.

Methodology

The basis for this poster session was an exploratory descriptive study. A survey was conducted of directors of FIDER accredited professional level programs, employers/supervisors of design firms, and entry-level interior designers. A list of design firms was compiled from internship lists of six Texas FIDER accredited professional level programs. Three questionnaires were developed, pilot tested and revised, and mailed to the three sample groups. Descriptive statistics and non-parametric measures, a one-way analysis of variance by ranks, and the Student-Newman-Keuls test, were utilized in this study. A probability level of 0.05 was considered statistically significant.

Visual presentation. In addition to posters displaying curriculum concepts and representations of the results of failure to apply building codes, a video developed by the National Fire Academy, shown on a computer screen, will demonstrate the aftereffects of disasters. Attendees will be asked to complete a survey regarding their opinions of building codes and curriculum development.

Summary of Results

Based upon the results of the study, an introductory course dedicated to teaching building codes would be desirable and appropriate. This specialized knowledge would be beneficial to designers, as they will assume liability for lack of code compliance in projects. Discussion, as a teaching method, is recommended to assist in the retention of subject
matter (McKeachie, 1986). Teaching aids such as field trips, video presentations, and jigsaw puzzles related to code compliance problems could stimulate student interest. Classroom testing could be used initially to assess understanding of building codes. After students complete the introductory course, they would be prepared to apply code concepts in studio course projects. Independent work would be appropriate at this stage after students have attained an acceptable skill level (Choate, Enright, Miller, Poteet, & Rakes, 1995).

References


IMPACT OF DIFFERENT FLUORESCENT LIGHT COLOR TEMPERATURES AND COLOR RENDERING INDICES ON LIGHTING PREFERENCE AND VISUAL COMFORT FOR ELDERLY CONSUMERS

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Oklahoma State University

Purpose

In 1990, U.S. Bureau of Census reported the percentage of the U.S. population over 65 years of age is increasing. By 2020, one of every four Americans will be over 65 years (Weaver, 1994). Growth in the mature market presents opportunities for businesses because the over 65 population accounted for over $60 billion in annual consumer spending in the U.S. The needs of this aging population need to be considered. Moschis (1996) identified directional signs, readable labels/tags and comfortable store environment as affecting an older person’s shopping decisions. Lighting influences the customers’ response to each of these factors.

According to aging eye theory, physiological changes in the eye cause increasing sensitivity to glare, decreasing ability to focus on nearby objects, increasing adaptation time, decreasing color sensitivity, decreasing in the amounts of light reaching the retina, and decreasing visual acuity (Baucom, 1996; Miller, 1992; Nuckolls, 1983). Therefore, it can be deduced that aging consumers have different preferences for lighting than younger consumers.

The purpose of the study was to understand the impact of different fluorescent light color temperatures and color rendering indices on lighting preference and visual comfort for older and younger consumers.

Methodology

A 2 x 2 x 2 factorial design with repeated measures to identify the impact of three independent variables: (1) color temperature (3000 K and 4100 K); (2) color rendering index (75 CRI and 85 CRI); and (3) age group (younger, 20-30 years, and older, over 65 years) was used. Dependent variables were perceived visual comfort and lighting preference as measured by 8 point Likert-type scales. Energy saving T8 florescent lighting developed for use in business situations was used.

To identify differences between older and younger consumers, the responses of 40 subjects over 65 years were compared with the responses of 40 subjects 20-30 years of age. All subjects were screened for visual acuity, color blindness, and prior knowledge before participation in the study. Random selection was used for sequencing the lighting conditions in the Lighting Technology Laboratory. Two null hypotheses were tested. Hypothesis 1: there is no difference in subjects’ perception of visual comfort. Hypothesis 2: there is no difference in subjects’ preference of lighting. Analysis of variance was performed to determine any differences among the variables.

Summary of Results

The results indicate that both older and younger adults perceived greater visual comfort under higher color temperature (F = 7.51, p = .006) and preferred the higher color temperature (F = 11.39, p = .0009). The older adults perceived greater visual comfort under all lighting conditions than the younger (F = 6.17, p = .047). Older adults rated all lighting conditions higher than younger adults with regard to preferences (F = 4.16, p = .044). These findings indicate that older adults are not as sensitive to different K and CRI as expected from aging eye theory.

Implications from this study can be applied to store lighting techniques to attract older consumers. Interior and lighting designers can benefit from the insights this study provides when developing retail designs.
References


ANALYZING CULTURAL DIFFERENCES IN KITCHEN FURNITURE DESIGN

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Background

Kitchen is one of the most important behavioral settings for individuals and families. Its spatial characteristics have been drastically changed through industrialization from our old times. Its development has enhanced our residential environment and our quality of lives regardless of cultural differences. Among many changes happened in the kitchen, it was kitchen system furniture that most contributed to the improvement of kitchen. Due to globalization and industrialization, kitchen furniture design became to look alike at a glance.

Therefore, it became very hard to distinguish the differences in furniture design according to country unless one knows information about the products previously. Functional problems became exposed because of the design differences due to lifestyle differences between people in the country where the product was made and people in the country where the product was used. Besides this, aesthetic characteristics appear to be also different at second glance because aesthetic norm and habit can be different among cultures.

Purpose

The purpose of this poster presentation is to show the similarities and dissimilarities of kitchen furniture designs among four leading countries in this business, USA, Italy, Germany and Japan.

Methodology

This research used a content analysis method. In each country, three among best-known companies were selected. Recent catalogs of the total 12 companies were collected. Sampling lists were made and pages were randomly selected for each company. Selecting 15 designs per company, a total of 180 designs were analyzed using content analysis technique. The analysis unit was each system furniture design. The analysis framework was developed through literate reviews and a forum among research associates and kitchen furniture designers. Major analyzed features were including proportion of the cabinet door types of moldings used in the door, compositional characteristics of the systems furniture, eight of the upper cabinet installed, compositional character of the sinks, material, colors, furniture arrangement and etc. Data were collected between October, 1998 and April, 1999 through mails, telephone, and actual site visits to both domestic and foreign sites. Data have been analyzed for 5 months until now. Frequency, percentage, mean, chi-square test, Duncan's multiple range test were used.

Summary of Results

This research revealed several differences in kitchen furniture design according to countries. Some of the major findings were as follows: The
proportions of the cabinet doors were significantly different among countries. Japan had longer rectangular shape than other countries whereas Italy had square shape more frequently than others. While American used more moldings on the door, Japan seldom used moldings: Sink bowl design appeared very much different. While western countries had smaller bowls, Japan had larger one despite of small kitchen size which stemmed from different lifestyles in relation to food and dining habits such as dry food versus wet food custom. This research gives insight into understanding and appreciating different cultures and reflecting them into actual designs. It was expected to guide Korean kitchen industry in right direction to develop culturally appropriate design both functionally and aesthetically, avoiding simple imitations of western design.

(Since this project will be finished in coming December, detailed comparisons will be able to be present at the conference, with ample visual examples showing the significant differences.)

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STUDIO EXPERIMENT TO REINFORCE STUDENTS' ABILITY TO DEAL WITH CULTURAL PROJECTS

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Background

As we enter the door to the next millennium where expansion of time and space dimensions will be more appreciated, the content of design education, especially interior design education where place making is emphasized, needs to be changed from convention to a more multi-cultural approach. This means that both geographic diversity and the time dimension should be extended and respected in classroom teaching. Graduates in this profession are expected to deal more interactively and seriously with people, space, and projects in diverse cultures.

Purpose

The purpose of this poster presentation is to share a semi-studio class project of a graduate course where students are expected to search through unfamiliar cultures, understand them, extract key contents, develop design concepts, and transform them into a modern visual creation. Students hand in a scaled concept design model. Since a substantial number of students in the class were current university professors, instructors, and students pursuing university teaching for future use, the whole process and output package were intended as educational materials in studio teaching dealing with multi-cultural projects.

Methodology & Summary Results

Among 11 Students' projects an example shown here examined "Maya Civilization".

As diverse cultures in the world are recognized as being connected vertically and widely, this team was interested in the third world. Whereas the Mayan Civilization in Southern America had achieved its own unique and excellent civilization in the past, it could not be widely disseminated, because it existed as a third world civilization. To accomplish this goal, students sought details concerning Mayan information to create an environment in present times. Students chose a hotel lobby located in Tikal Guatemala.

As a knowledge base to develop design concept, students investigated the Mayan civilization. Mayans attached importance to the attitude adapting their given life and the predicting their future through astrology. Therefore, students proposed to reconstruct the ancient Mayan idea of time and space in creating modern spaces.
It was the Mayan time concept that was important through the whole design process. To express this concept of time in our project, light was brought from outside into the interior space positively. The light from the clerestory and main entrance was expected to make people feel different aspects of the space dynamically. The post, composed of masses stacked in twisted angles, was intended to generate curiosity about eternal image of Mayan time and space. The wall of the office area was slanted to stimulate the same image. In addition, layers in shape of stylolites on the wall and the furniture were added to imply the passage of time. The void space, which was open from basement to upstairs, was made to express magnitude and superiority of the culture and the connection between ancient and present Maya. As one approaches from the entrance hall passing through a low ceiling to this high ceiling space, one can evenly feel the recognition of the image. It endows the feeling of transiting space, which was even reinforced by the flow of water on the wall sculpture. 

Finally, a scaled model of conceptual design was made. Detailed information collected through the research planning process will be explained and the detailed plan and outcome, including lobby, guestroom, and furniture design, will be presented at the conference.

<This presentation is prepared by the professor who taught the class, and a team of 4 graduated students who actually implemented the example project.>
EXTRACTING AND APPLYING CULTURAL INFLUENCE FOR INTERIOR DESIGN WORKS

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Background

It is expected that, in the 21st Century, with the active exchange among various cultures, the characteristics of existing cultures will possess sufficient variety needed to support the complex cultural features of multiple nationalities. This enables many different cultures to coexist in a single culture. It is highly recommended that the unique traditional features should be analyzed and utilized in each culture to create a design of modern environment through the re-interpretation of these traditional features.

Purpose

The students of interior design were required to understand the tradition of other cultures and to apply this knowledge to the field of interior design; it was the purpose to make students compatible with the upcoming needs of the future with multiple nationalities.

Methodology

The following methods of education were suggested for students understand other world cultures and to apply those cultural traditions to the interior design field.

In the first stage, an opportunity was given to explore and discuss about characteristics of example, and analyze where the characteristics might be come. Through this stage, students were explored to enhance their analytical ability.

In the second stage, students' own works were explored and applied the traditional culture into their design.

1. The example of extracting cultural influence Ando Tadao, a Japanese modern architect, was chosen to give an example of a practical application of this method. His work carried the characteristics of the Japanese Culture. The students will be able to understand traditional influence in his modern works and the way of transforming tradition into the modern design.

2. The practice of applying cultural characteristics
   The practice of applying cultural characteristics is a process which enables students to understand a certain culture and to apply this understanding to design projects. This was illustrated in designing a travel agency. The students referred to the re-interpretation of tradition in Ando-Tadao's work to decide a country and they could extract the traditional factors, and explore the way to re-interpret it in the modern perspective for their own design plans.

Summary of results

One of the examples is a Spain travel agency where Spanish culture was applied, and the interior design is as follows:
   The concept of Spain culture bears the features of complexity due to geographical features, which were broken down into 4 specific concepts
such as sense of place, ornamentalism, vernacularism and symbolism. The above factors were applied to interior design in accordance with the space program. The sense of places created the image of a space within another spaces, and it was applied at the Courtyard in the center of the space for meditation. Symbolism was expressed in the figure or color reflecting the experience of the past, and the images of water to remind the beaches of Southern Spain at the corridor. Ornamentalism was shown with the form of simplified and repeated gothic columns and arches of the Spanish Architectural Style. Vernacularism was expressed by the use of native Spanish interior finish materials for reminding the spectators of the vernacular image.

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SIMPLE-COMPLEX PREFERENCES OF INTERIOR IMAGES
Using Interior Image Preference Scales

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Background

People differ in their preference for environmental settings. Differences among individuals arise from their fundamental unique preferences. Among these preferences, environmental preference is referred to as environmental disposition in Environmental Personology. Environmental preference of an individual is his/her way of responding to the environment, and is recognized as an important method of predicting the person's environmental behavior and of surveying the person's lifestyle as it reflects his/her personality.

Interior image preference, among interior environmental disposition, is a representative visual sense and perception of an individual. The present-day designer is called upon to design for a diverse group of clients. Until now, to predict consumer's decision in relation to interior markets, various aspects were used such as demographic, socio-economic, personality, and so on. Age and gender among demographic factors have been primary aspects to predict human behavior. If environmental disposition, especially toward interiors is found different by age and gender of subject, the power to predict consumers' preferences will be increased. If a valid and reliable visual instrument is available, it will make the task of identifying one's own, students', clients', and consumers' preference much easier. Furthermore, it will also be very useful in both educational settings and interior markets.

Purpose

The purpose of this presentation is to share research, which clearly delineated the relationship between the preferences of interior image, especially simplicity-complexity, and the age and gender of subjects using the IIPS (Interior Image Preference Scale), which is a developed visual tool by Lee (1997) for measuring the interior environmental disposition (Addendum 1).

The IIPS is composed of three sub-scales such as Masculinity-Femininity, Traditionalism-Modernity, and Simplicity-Complexity. Each sub-scale was developed to measure the systematic variable effectively and accurately by controlling other possible extraneous variable effects, using computer simulation techniques.

Methodology

The data were collected from Oct. 6th, 1997 to Oct. 20th, 1997. 691 responses were analyzed. Frequency, percentage, mean, Generalized Linear Models and Duncan's multiple range test were used for statistical analysis.

Summary of Results

Regardless of age and gender, the subjects generally preferred complex interior images (Addendum 2). However, this research revealed significant differences in interior image preferences according to age and gender of subjects. With regard to simplicity-complexity preference, variance according to both age and gender were found (Addendum 3). People over the age of 50 were more likely to prefer complex interior images as compared to people under 50. Women were more likely to prefer simple interior images than men, and vice-versa. This research verified significant differences in simplicity-complexity preferences of interior image according to age and gender.
The development of visual tools, which measure an individual's interior preference or environmental disposition, is not only an essential part of methodological advancement for environmental design research, but also a useful educational instrument in showing how different preferences exist among people and how this might affect students' design solutions. This research expanded an existing range of both environmental disposition theory and methodology. It also added residential interior dimension to a more macro oriented existing environmental research.

(In this presentation, the visual IIPS scale and its usage in the research, and the possible effectiveness of using it in various interior educational settings will be discussed. Since it only takes two minutes, participants will be able to test it easily in the conference. Additional information about the reliability and validity of the IIPS will be shared with participants who might be interested in using the scale.)

References


DESIGN OF THE MASTER CLASSROOM

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Purpose

The antiquated, 1950s college classroom with tablet-arm desks, chalkboards, and slide projectors is no longer viable. A Master Classroom was designed as a model for the next millennium. The design addresses four issues:

- Universal Design,
- Sustainable/Green Design,
- Multiple Teaching/Learning Models, and
- Technological Innovations.

Methodology

Students in a graduate seminar were challenged to design a classroom that would serve as a model for academic settings in the 21st century. Their conceptual designs were realized when the administration made funding available to implement the design as a prototype for a new academic building on campus.

Summary of Results

Universal Design principles address the needs of all users regardless of age, physical stature, or ability. Tables and armless chairs are height adjustable to meet the needs of individuals who are shorter, taller, or heavier than the "average" person or those who use mobility aids. Lever handles support people who have grip difficulties - or anyone with their hands full of books. A quality acoustical environment and sound system support individuals with vocal cord problems or hearing impairments. The lighting can be adjusted for those with low vision, and neutral backgrounds support those who read sign language. The custom designed podium can be used from a seated or standing position depending on instructor preferences.

"Green" materials, finishes, and installation procedures were selected. Low VOC emission paints and adhesives that are not detrimental to indoor air quality were specified. The carpet is part of manufacturer's recycling program, and the installation uses a "velcro like" technique to avoid off-gassing problems. Many materials were reused to avoid unnecessary use of raw materials to minimize both manufacturing pollution problems and waste disposal problems.

The Master Classroom meets the needs of multiple teaching and learning styles. Students can face the front of the room to see audio-visual presentations using the slide projector, tape or CD player, VCR, or computer projection equipment. In minutes the room can be rearranged so that students are in small groups with tables and tackboards. Minutes later everyone can assemble in one large group with mobile desks for debriefing, then clear the floor for a roleplay. Faculty can use the sound system to phone colleagues in distant locations for consultations. The addition of a codex unit will allow visual communication from another state or another continent.

The room fully supports current technology to enhance the learning experience. There are power and network hook-ups for 35 notebook computers. Leading edge audio-visual equipment is controlled from the podium, as is the multiple-stage lighting. When the instructor touches the control pad, the lights dim, the screen descends, and the ceiling mounted LCD projector is activated. Both two and three-dimensional images can be projected using the visual presenter. The room is designed to facilitate upgrades, so that yet to be developed technological innovations can be easily incorporated.
The design of the Master Classroom enables faculty and students to experience 21st century design and provides a working model that can guide decision-making into the next millennium. (Poster will include photographs.)

Credits

Graduate students who developed the conceptual design under the direction of Dr. Jones include: Judy Ross, Julie Thayer, Stephanie Peck, and Mieko Inaba. David Clifford, Associate Dean, and Louise Jones, Interior Design Coordinator, were responsible for implementation of the design.
INFLUENCING FACTORS ON VISUALIZATION SKILLS AMONG INTERIOR DESIGN PROFESSIONALS

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Purpose

Visualization, the ability to form a mental picture of details, is an important skill interior designers use to formulate possible solutions to a design problem. Being able to visualize the end result often determines the success of the solution as well as the success of the designer in the work place. The ability to visualize varies among interior design students (Nussbaumer, 1998), and therefore, these abilities may vary among interior design professionals. Thus several factors may influence visualization skills.

One of these factors may be learning styles. Learning style is the way people learn (Kolb, 1984). Some people may process information best in an audio format. Some may learn best by seeing visual images of the information. Some may learn best by experiencing how the information is developed. Others may learn by a combination of several methods of processing information.

Guay (1978) examined factors that may have an affect on spatial performance tests and found that people who had experience with activities requiring spatial thinking performed better than people who had few experiences with spatial activities. In higher education, Nussbaumer (1998) examined various influencing factors on visualization skills among interior design students and found that students' visualization skills improve as they progress through their major. Chinese-American children outperformed Caucasian-American children in several areas including spatial relations and visual discrimination (Huntsinger & Ching, 1994). Therefore, other factors—activities/hobbies, years of professional experience, positions held, and cultural background—may influence visual abilities.

Methodology

The purpose of this study is to examine whether various factors such as: learning styles, activities/hobbies, years of professional experience, cultural background, and geographical location will influence visualization skills. Two hypotheses form the basis of this study: 1) there is a relationship between learning styles and visualization skills, and 2) factors that influence visualization skills are activities/hobbies, years of professional experience, positions held, cultural background, and geographical location.

Subjects were selected throughout the United States by using American Society of Interior Designers (ASID) and International Interior Design Association (IIDA) membership listings. Subjects completed three sections: a biographical data sheet collected demographic data, Kolb's (1984) Learning Style Inventory identified learning styles, and Isham's (1995) visualization test measured visualize ability. Subjects received a letter of information about the study and also were informed of the research through ASID and IIDA web sites. Participants were given access to survey packets through a secured web site.

Summary

Results will be shared with interior design programs to give students suggestions in choosing the appropriate positions within design firms based on their learning style. Suggestions that may enhance students' visualize abilities before entering the design world will be available to programs. With the improvement of visualization skills, several beneficial outcomes may occur. Students' visualization skill levels will increase, and thus, industry will be provided with higher quality entry-level employees. Higher visualization skill levels will benefit clients with better quality design solutions, improved speed of project management, and improved profit margins. To be more successful
interior designers, design professionals should strengthen their visualization skills to solve increasingly more complex design problems faced by the industry today.

References


BUILDING BRIDGES: COMMUNITY SERVICE PROJECTS & THE DESIGN STUDIO

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Purpose

Community service projects have a long history of application in design programs. The poster will examine the connections this type of project can make for students and schools with the larger community through evaluation of a specific project. Evaluation methods include the use of post project student and client reviews. Images will include student solutions and site images.

Process

The undergraduate interior design program was approached to provide design development proposals for the adaptive-reuse of a large inner-city church into elderly housing. Student involvement included: interviewing the client representatives and the developer for programming purposes; field measuring the existing building; researching the end user group; developing proposals in a format suitable for presentation and submission for government funding; and presenting their proposals to a panel from the community development corporation. Both students and clients completed post project evaluations which included questions about the project, end user research/knowledge, time line, solutions, and potential for funding.

Summary of Results

The group experienced problems with access to the facility resulting in time line delays. Students developed a new understanding of elderly issues through traditional research and visits to existing elderly housing sites. The client was happy with the breadth of solutions presented. It is hoped that this presentation will provide the platform for discussion of community service projects and possible future panel presentations at subsequent meetings.

References


REAL WORLD DESIGN EXPERIENCE VS. CASE STUDY: DOES THE PROCESS DIFFER?

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University of Minnesota

Ken Brazil
Stamford University

Chadd Gibbs
University of Minnesota

Purpose

The purpose of this poster session is to share in graphic and digital format the processes and results of a project that presented one group of students with a real world design experience, with unknowns and uncertainties, while another group approached the problem from a case study basis. (The authors are also submitting a proposal for a presentation to discuss the comparison study that was conducted in conjunction with this project.)

Methodology

The poster session will include hard copy graphics as well as a computer based interactive module. The poster boards will illustrate a sampling of the most successful designs from both groups of student designers, as well as conceptual drawings generated by the groups. The project involves a retail space within a department store, a boutique area targeted at "Generation Y." Conference attendees will also have access via an interactive module to video clips illustrating the differences in the students' processes, segments of interviews, student work sessions, photos of the site, and photos of all of the completed student designs. Viewers will also be given the opportunity to evaluate the projects using the same criteria that the judges used.

Summary of Results

The poster session will supplement the traditional static poster format by allowing viewers to access segments of the students' design processes, their interactions, interactions with the instructors and client, and the site. It will also engage the viewers by allowing them to judge the projects. The results of the viewers' evaluations will be automatically calculated and immediately posted so that the viewers can compare their own evaluations with others.
THE BOEING BUSINESS JET: RESEARCHING AND DESIGNING AN OPULENT INTERIOR

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Purpose

Design education offers students experience in research, planning, implementing, and executing design solutions for various interior environments, each with unique needs and creative potential. Seldom is the student challenged with an interior environment that requires stringent conformity to safety regulations and material use, unusual limitations associated with spatial allowances, and solving for atypical circumstances of living, working, and transportation interiors collectively.

This poster presentation illustrates the design process associated with creating an aesthetic and functional environment for a Boeing Business Jet (BBJ-737). The six week studio assignment allowed students to explore a new avenue of design, enhance research skills, expand creativity through maximization of space and customization of material and finish applications, and solve for environmental and behavioral concerns related to aircraft interiors.

Process

Raytheon E-Systems challenged the senior studio class to design the interior of a Boeing Business Jet (BBJ-737) for a prominent client in the entertainment industry. The client would use the aircraft as a business tool, to entertain, to impress, and for corporate/personal transportation. An opulent interior environment from material and finishes choices to the engraved insignia on the nickel-plated seatbelts and the latest in high-tech electronics for passenger comfort were required. The design process commenced with a visit and in-depth tour of the aircraft at various stages of design development from skeletal interiors to actual mock-ups of finished interior spaces. This exposure allowed students the opportunity to explore the volume of space and develop awareness of weight restrictions, customization of materials and finishes, creative lighting techniques, environmental challenges, and other restraints as dictated by the Federal Aviation Administration. Students pursued the design center and resource lab as staff designers educated them on the unique fabrication and application of materials and finishes, spatial restrictions, and other specific design needs for aircraft interiors.

The research phase continued as the students gathered information about their client. Students acquired information through review of television interviews, feature articles in design magazines, and information from related websites. A client profile was then developed. The design division of Raytheon E-Systems supplied students with a floor plan of the aircraft, longitudinal and latitudinal sections, access to sample layouts, and a scaled example of aircraft seating. Additional research and program documentation of specific regulations was performed. Space planning proceeded and eventually culminated in a design solution meeting the needs of the client for a comfortable, safe, and functional environment that served as an interior space for living, working, and transportation.

The final projects were presented to a panel of jurors comprised of professionals and staff designers from Raytheon E-Systems. A project was then selected that best met the needs and aesthetic expression of the client.
Summary

This project proved to be an exciting and challenging experience for the students. With the given limitations of aircraft interior spaces, the students were able to concentrate on creative and diverse solutions for an environment that must serve several functions at one time. Knowledge and understanding of the creative and unlimited potential of material and finish applications for specific and unique environmental needs will allow the student to enter the workforce equipped with universal skills for addressing diverse and challenging design problems in the future.

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