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The Chaircase - Future Chair Design Research

Best Creative Scholarship Award
Creative Scholarship: Design as Idea

Sookwang Lee, The University of North Carolina at Greensboro

The Chaircase is an extension of the study regards to what a futuristic furniture could be in the next design trend. The thesis study is about the aesthetic elements that make furniture look more futuristic, and this chair design is also based on that definition. The Chaircase project was part of a fundamental study to know how to make a chair as well as what design elements constitute futurism.

People have different perspectives of future and this was considered as the point to start the research. For example, future design is considered always and mostly as curves. Have you seen the Jetsons? What do you remember that seemed so futuristic? Was it the flying cars? Was it the floating buildings? Have you seen Zaha Hadid’s Architecture? There are so many different perspectives that had to be defined, and therefore, it was brought into three different definitions. The first was when new inventions are made, new products appear with new functionality that happens make new design. Second, the belief of machinery creates design that are less human design due to industrialization. Last, there is only aesthetics that makes it seem like future.

The research methodology began with the designs of an unbuilt airport that was to come in the near future, imagining how the airport embraces futuristic aesthetics. The decision to studying the airport was made because airports are a destination full of technology with diversity culture and humanity. Accordingly, analyzing the specific characteristics and trends of Zaha Hadid’s Beijing Airport was visionary evidence to futurism. The airport furniture that had been designed was benches in front of the gateway area pass the security and the conceptual bench focused on two main aspects, patterns and structures. Ultimately, patterns were brought to the furniture design as main aesthetic element and structures as main conceptual idea element.

The computer is an important tool for designers to utilize for imagining, creating, and preforming, but now they are beyond the limit of actually contributing into the design area. Designers will imagine through their mind and describe the patterns by using the computer system and controlling the elements with rules. The architectural design trend in making patterns as a design element is what was called parametric design. The computational process of making patterns are unexpected designs that comes from a simple basic equation. Designers are longing, constantly to make new formations in furniture and at the same time, many designs and methodologies have reached a limit to where the creation does not always come from human designers. Nowadays parametric designs are possibly been built in real, whether the complex computer works are precise or massive. The outputs are made through laser cutters, 3D printers or CNC machines in which the computers are doing the work better and more efficient. The difference in futuristic production are closely related with crucial programs and tools, and therefore, the Chaircase was an experience to design and produce with 3D Rhino and CNC machine using plywood materials.

The conceptual idea is to combine the function of a chair and a bookcase, meanwhile using the segmented pieces align together to make a pattern form. The local book café called Scuppernong located in Greensboro downtown was the reference site to be researched and observed and to capture the aesthetic that is likely seen in bookstores and cafés. The chair has curved lines flowing from the back and to the front legs of the chair and the curved lines are stacked adjacent to create a negative space behind the back of the chair which is used for storing and displaying books. The dowel joints were used mainly for the manufacturing process since the constraints of the CNC process had to be considered. In summary, the organic pattern design creates a future look with the function of a chair and a bookcase.
**Heydar Aliyev Center by Zaha Hadid – Azerbaijan**

“Mesa” Table design by Zaha Hadid for Vitra


**Pattern Design**
Algorithm Design

**Pattern Design**
Permutation Design
Kinetic
Tessellation
Computer Aid

These can be expressed in a form of algorithm

Appendix Images: The Chaircase - Future Chair Design Research, Sookwang Lee
**Computational Modeling**

Engineering

Program - Grasshopper
Manufacturing – 3D printing, CNC

- Patterns are naturally developed into a digital formation.
- Accuracy and complex design are manufactured.

Appendix Images: The Chaircase - Future Chair Design Research, Sookwang Lee
Appendix Images: The Chaircase - Future Chair Design Research, Sookwang Lee
Responsive Interior Surface // BarkLight
Creative Scholarship: Design as Idea

Matthew Wagner, Virginia Tech

BarkLight is an interactive surface that responds to proximity, movement, and curiosity. It serves as a biophilic link between exterior site, occupants, and interior environments.

The flattened 96” x 42” poplar bark panel is delicately mounted in a 1 1/2” steel angle frame. Its presence stimulates occupant interest due to its unusual presentation of a natural material. Serving as a transitional link between the site, occupant, and interior, it helps to connect the occupant to a space, and the material to the building. Through biophilia, the occupant is immediately comforted by the image of the bark, a familiar natural material. This is the first transitional link (occupant/space). The material is embedded with technology that is often used in newly designed hi-tech spaces. Through its activated technology, the material makes its connection to the building. This is the second transitional link (material/building).

The occupants are taken by surprise at first when they realize the large panel is made of real tree bark. When they get closer to it, perhaps reaching their hand out to touch, they will find another element of surprise. Embedded green LEDs will glow and follow their hand around when waived in front of the panel. This creates an interior experience that is interactive and memorable.

The 96” x 42” bark panel was CNC drilled to embed 1152 3mm LEDs on a 24x48 grid. 1 green LED was embedded in each hole. 24 Arduinos are programmed to run a pattern code to the LED grid. 4500’ of copper wire was used to connect 6 circuitry boards to the 1152 LEDs. Each circuit board accommodates 4 Arduinos. 1 Arduino is used to activate each grid column consisting of 48 LEDs. There are 24 grid columns.

We are programming a Microsoft Kinect sensor to communicate with the Arduino code. The interactive idea is that when you walk up to the bark panel, there won’t be any lights on, so the occupant will think it’s a nice big piece of interesting bark. Then, when the occupant reaches out to touch the bark, the Kinect sensor will pick up on the hand movement, and the green LEDs will immediately illuminate and follow the occupant’s hand around. The resulting effect will create a comet tail that has a slow fade as the occupant swipes their hand around.

This is an idea to directly connect occupants with nature while being in an interior environment. By designing a new material that is embedded with technology, we directly connect the responsive surface with its hi-tech building interior. We are researching how the interaction with this responsive surface, BarkLight, has affected occupant experiences while being in a new interior environment.
Appendix Images: Responsive Interior Surface // BarkLight, Matthew Wagner.
Appendix Images: Responsive Interior Surface // BarkLight, Matthew Wagner.
Interior Design Enhancement Opportunities in Waiting Areas for Patients with Neurological Disorders

Best Poster Award
Poster: Scholarship of Design Research - Design Practice & Process

Alina Vargas, Savanah College of Art and Design
Helena Moussatche, Savanah College of Art and Design

Patients that suffer from neurological disorders are a large portion of the population, affecting one out of seven people in the world at some point during their life, they have ranging levels of anxiety, stress and agitation that worsen in waiting areas for their testing, consultations and treatment. This study focuses on understanding the interior design factors that affect this population and their needs in waiting area environments, in order to obtain insights on how to design better environments for them, how to avoid triggering their symptoms and, ultimately, on how to accommodate individuals of various ages, conditions, sensibilities and personalities in waiting rooms. A mixed methods research methodology, supported by medical and design literature, combined narrative gatherings of specialist doctors, interviews to patients, companions and medical staff, and a series of waiting area observations. The synthesis of these findings resulted in knowledge for better healthcare design, that is more inclusive as it improves the lives of this large, but often omitted population.
Enhancing the Business Traveler Experience through Hotel Design
Poster: Scholarship of Design Research - Design Practice & Process

Brittany Flock, Florida State University
Lisa K. Waxman, Florida State University

Purpose
The purpose of this study was twofold. The first goal was to gather data on business travelers' preferred hotel design features and amenities. The second was to overlay those preferences with the WELL Building Standard to look for common themes. Insights from the findings formed the foundation of design guidelines for creating hotel spaces that enhance business traveler well-being.

Background
Business traveling allows companies to conduct business negotiations more effectively, facilitate knowledge transfers between multiple company locations, attend training or large conferences to gain more knowledge of a particular industry as it grows or changes, and conduct other important business operations (Mäkelä, Kinnunen, & Suutari, 2015; Burkholder et. al, 2010). Thus, it becomes imperative to provide hotel accommodations that can best meet these business travelers' needs while enriching their travel experience.

Stress related to business travel often leads to health concerns, such as sleep deprivation, unhealthy diet, anxiety, weight gain, susceptibility to allergies and illness, and depression (Chen, 2017). Business travel stress triggers occur during three travel phases: pre-trip, destination, and post-trip (Chen, 2017; Carlson Wagonlit Travel Solutions Group, 2012). This study placed an emphasis on the destination phase of business travel.

The WELL Building Standard is a building standard and certification/rating system that focuses on human health and well-being (International WELL Building Institute, 2016). This standard was first launched in 2014, and as of 2016 there are 100 certified WELL projects in twelve different counties (International WELL Building Institute, 2016). No WELL pilot program for hospitality spaces has been published at this time. Therefore, one of the goals of this research was to lay a foundation of design guidelines that correspond with the WELL Building Standard to inform a future pilot program.

Method
The research involved a mixed methods approach including a survey, interviews, and observations, using the WELL Building Standard as a lens. The survey was sent to business travelers through social media, and 154 responses were received. Twelve interviews were conducted with business travelers to better understand their preferences. In addition, three interviews were conducted with hotel management to understand the management perspective.
The interviews with hotel management and observations were conducted as part of case studies of two hotels in San Antonio, Texas, a business traveler hub infused with deep history and culture. One boutique hotel and one chain hotel located within a 0.5-mile radius of the Henry B. Gonzalez Convention Center were selected as sites for the study. Behavioral mapping and a WELL Building Standard checklist were used as tools to better understand how the social spaces served user needs.

**Findings**

The survey revealed the most influential stress triggers for business travelers. The top five stress triggers, in descending order, are poor/no Internet connection, inconvenient hotel location, poor quality hotel, inability to maintain healthy eating habits, and inability to maintain a fitness routine. Interviews revealed themes showing the relationship between travel-related stress triggers and the seven concepts of the WELL Building Standard. Key issues such as staying connected, celebration of local culture, security, cleanliness, sleep quality, acoustics, thermal comfort, access to fitness, healthy food and water, and ergonomics can all be addressed by the seven concepts of WELL, which are Air, Water, Nourishment, Light, Fitness, Comfort, Mind. The presentation will outline these relationships.

**Conclusion**

The results of this study have the potential to positively impact hotel design to better accommodate the needs of business travelers by applying the concepts of the WELL Building Standard.

**References (APA)**


**What is the New Interior Nexus for Cultivating Civic Engagement in Communities?**

**Poster: Scholarship of Design Research - Design Practice & Process**

**Quintel Gwinn, Queens University of Charlotte**

One of the several issues in addressing existing interior environments points to whether there are adequate places to engage in communal activities within under-served neighborhoods. While libraries, museum, and community centers are available, other factors, such as proximity to access, facility programming, and spatial adaptability are challenges that affect facility use. Little has been discovered or directly investigated concerning the spatial needs of under-served urban communities and what design-related aspects influence the likelihood of successfully programmed and activated interiors.
Effectively designed public spaces that embrace the cultural and communal needs of neighborhoods lead to increased engagement and use of civic assets. By learning how to listen actively to the knowledge people have about their culture, design professionals can both respond to these communities and interpret creativity. Ethno-semantic methods can help designers to enhance their professional responsibility to citizens and, at the same time, to creatively fulfill the overarching goals of the space.

By considering a contextual-based approach to developing spatial design solutions, this study aims to identify the variables that influence the outcome of well-designed interiors. Furthermore, the impact of centering African Americans and their culture when developing community-based interior design solutions has not been explored.

The findings of this study have the potential to impact both theory and practice by contributing to community-based design research as it relates to the importance of creating culturally relevant public spaces and highlight the connection between civic engagement and the built environment. At large, this study can yield practical data to aid design professionals with program development and implementation strategies.

**References (APA)**


**Biophilic Design in the Classroom**

*Poster: Scholarship of Design Research - Design Practice & Process*

*Emily Miller, The University of North Carolina at Greensboro*

The design and condition of an educational setting fosters a sense of place, control, and commitment to the environment. An educational setting contributes to the relationship between building quality and student learning (Uline, Tschannen-Moren, and Wolsey, 2009). The design of an educational setting introduces cognitive, social, and emotional development of students, creating a significant importance in a child’s development (Uline et al, 2009; Maller, 2009). Direct experience of nature in middle-childhood, eight to twelve, has the most powerful effect on children’s psychosocial growth and development (Maller, 2009). Hands-on contact with nature promotes children's mental, emotional, and social health (Maller, 2009). Nature can improve children’s cognitive abilities, and resistance to negative stresses and depression, and may reduce the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) (Taylor & Kuo, 2009). Biophilic design is based off of the biophilia hypothesis (Gillis, & Gatersleben, 2015). Biophilic design can be beneficial to the occupants of an interior environment through the impacts of nature on human health and wellbeing (Gillis, & Gatersleben, 2015).

A child's direct experience of nature affects psychological growth and development during middle-childhood, ages 8 to 12 (Maller 2009). Contact with nature promotes attentive abilities in children and effects their motor coordination (Maller, 2009). In 2008, Kellert and colleagues refined the biophilic design into six biophilic design elements and roughly 72 attributes of biophilic design (Kellert, et al., 2008). The biophilic design elements are broadly categorized as environmental features, natural shapes and forms, natural patterns and processes, light and space, place-based relationships, and evolved human-nature relationships (Kellert, et al., 2008). Environmental features consists of use of color, water, air, sunlight, plants, animals, natural materials, views and vistas, façade greening, geology and landscape, habitats and ecosystems, and lastly, fire. Natural shapes and forms consists of the use of images of
botanical motifs, tree and columnar supports, animal motifs, shells and spirals, egg, oval, and tubular
forms, aches, vaults, and domes, shapes resisting straight lines and right angles, simulation of natural
features, biomorphy, geomorphology, and biomimicry. Natural patterns and processes consists of the use
of sensory variability, information richness, age, change and the patina of time, growth and efflorescence,
central focal point, patterned wholes, bounded spaces, transitional spaces, linked series and chains,
integration of parts to wholes, complementary contrasts, dynamic balance and tension, fractals, and lastly,
hierarchically organized ratios and scales. Light and space consists of the use of natural light, filtered
and diffused light, light and shadow, reflected light, light pools, warm light, light as shape and form,
spaciousness, spatial variability, space as shape and form, spatial harmony, and inside-outside spaces. Place-
based relationships consists of the use of geographic connection to place, historic connection to place,
ecological connection to place, cultural connection to place, indigenous materials, landscape orientation,
landscape features that define building form, landscape ecology, integration of culture and ecology, spirit
of place, and avoiding placelessness. The last biophilic element consists of the use of prospect and refuge,
order and complexity, curiosity and enticement, change and metamorphosis, security and protection,
mastery and control, affection and attachment, attraction and beauty, exploration and discovery,
information and cognition, fear and awe, and lastly, reverence and spirituality (Kellert, et al., 2008).

The purpose of this research is to assess the biophilic quality of elementary school classrooms through the
use of a checklist. Four fifth grade classrooms from two public schools in North Carolina were used in
this study and documented for further comparison. Illumination and acoustic readings of each classroom
were taken. The Stress Reduction Theory and Attention Restoration Theory paired with Biophilic design
can help reduce stress in the classroom, focus attention on work for students, and improve their well-being
through these biophilic attributes assessed in the classroom. The research shows how implementing small
changes in the classroom can improve the overall well-being of students in the classroom. These changes
may be applied to any school and classroom through a low economic change.

References (APA)

Maller, C. J. (2009). Promoting children’s mental, emotional and social health through contact with nature:
A model. Health Education, 109(6), 522-543. doi:http://dx.doi.org/10.1108/09654280911001185


Journal of Educational Administration, 47(3), 400 – 426 http://dx.doi.org/10.1108/0957823091

The influence of biophilic classroom design features on South Korean special needs
students’ emotional behaviors
Poster: Scholarship of Design Research - Design Practice & Process

Hyunji Song, Florida State University
Jill Pable, Florida State University

It is generally accepted that there is an interactive relationship between a person and the environment
(Kytta, 2003). The principle of biophilia essentially identifies that a relationship between human beings
and nature exists. People tend to gravitate toward nature and nature gives people advantages in terms
of psychological well-being, cognitive, physiological, social, spiritual, and tangible benefits (Keniger,
Gaston, Irvine, & Fuller, 2013). Biophilic design is a framework that helps designers to apply the principle
of biophilia in a built environment. It includes direct experience of nature such as daylighting, indirect experience of nature including natural colors or biomimicry, and experience of space and place including prospect and refuge, and wayfinding (Kellert & Elizabeth, 2015). Researchers conducted studies about the influence of natural characteristics in built environments (Clay, 2001; Davis, 2004; Kaplan, 1992; Kellert, 1993). For example, natural environment has an impact on people’s mental functioning and social relationships as well as their physical well-being (Clay, 2001). The research showed that natural characteristics affect people’s physical and psychological health, especially in medical facilities, working offices, and learning environments. With regard to special needs students in learning environments, previous studies concluded that nature could positively impact these students’ emotional developmental processes and recovery. However, out of these studies were conducted outside, leaving a lack of findings concerning biophilic design within classroom settings.

This poster will provide an overview of a graduate research study in progress that examines the potential for biophilic design to positively affect children with special emotional needs learning in ‘mainstreaming’-style special education classrooms in South Korean middle schools. Anecdotal evidence from Korean special education teachers suggests that students must currently go outside to explore nature due to the lack of biophilic elements within these classrooms. Moreover, if biophilic design can affect special needs students in built learning environments, the author is further curious whether biophilic design features can differently affect both special needs student and non-special needs students in built environments, as these students share spaces in mainstreaming environments situations.

Through this study, the PI intends to identify special needs students’ likely emotional reactions to specific biophilic classroom elements by surveying and interviewing instructors. This poster will provide an overview of literature review and summarize findings from its preliminary data collection that will be available at the time of the conference.

References (APA)


An Investigation of Whole-School Sustainability
Poster: Scholarship of Design Research - Sustainability

Isabel Leon Villasmil, University of North Carolina at Greensboro
Dr. Amanda Gale, University of North Carolina at Greensboro

Children’s experiences in school can determine their academic, social, health, and behavioral profiles, which has contributed to increased attention on the importance of sustainability in school environments. Over the last decade several organizations, guidelines, and resources have been developed for creating sustainable school environments, such as the Center for Green Schools, Collaborative for High Performance Schools (CHPS), and Green Ribbon Schools. There has also been numerous research studies and “calls to action” from the fields of education, design, and psychology (Chapman, 2014; Cole, 2015; Higgs & McMillan, 2006) on the importance of sustainability and environmental education in
school environments. However, there is limited information on how to transform physical settings into pedagogical tools for environmental education (Kong, 2014).

This research explores the macro level context of sustainable design integrating an interdisciplinary framework to identify potential roles for school environments within the Whole-School Sustainability approach developed by Barr, Cross, and Dunbar (2014). The Whole-School Sustainability approach is based on the principles of sustainability that assist students developing skills, knowledge, and experience to contribute to an environmentally responsible society (Barr et al., 2014). The objectives of this research study were to 1) identify literature across disciplines to integrate into the Whole-School Sustainability Approach 2) categorize design patterns that fit within the expanded framework, and 3) ascertain gaps in existing literature that need to be addressed.

A comprehensive review of interdisciplinary literature on the topic of sustainability in school environments was undertaken to develop key findings. Therefore, the study began by examining the literature and selecting concepts that could be applied as educational concerns or design components. Design guidelines developed by CHPS and the Center for Green Schools were incorporated in the design patterns as well as design components of previous winners of the Green Ribbon Schools. Educational concerns were then cross referenced with design patterns identified in literature to demonstrate how concerns could be addressed within the design of the built environment. An expanded framework for the Whole-School Sustainability approach was the final result.

Some of the key concerns identified in literature on school environments were students including knowledge, age, and behaviors; teaching strategies including resources, expertise, and curriculum mandates; and the school environments including new construction, daylighting, biophilic design, energy efficiency, and aging buildings. Gaps identified in current research include a lack of quantitative analysis tools, empirical and generalizable research, and economical strategies for incorporating design patterns in existing aging buildings. Furthermore, the findings identified design patterns that are ideal for existing buildings versus new construction.

This research drew upon findings from a broad range of literature to assess the prospects of the Whole School Sustainability Approach. This research also addresses shortcomings in literature to identify the need for future research areas. We argue that the whole-school sustainability approach is not effective without considering the built environment. The poster presentation will graphically depict the findings.

**References (APA)**


Einstein’s Dreams: Cultivating Creativity by Combining Baratto’s Architectural Illustration Framework

Best Presentation Award
Presentation: Scholarship of Teaching & Learning - Teaching & Pedagogy

Dean Isham, East Tennessee State University

Problem Statement:

Since creativity is accomplished in the absence of a tangible space and is the product of the imagination (Hays, 2017), many educators debate if one can truly teach creativity.

Historically, beginning design students (BDS) enter design schools lacking the needed creative thinking skills emphasized in design education (Piotrowski, 2011). This condition creates obstacles for design schools as they strive to appraise creativity in BDS. Approaches to teaching creativity vary widely from traditionally based fine art sequences, to more pragmatic approaches, commonly focused on problem-solving and critical thinking.

“Classical philosophers have said the soul never thinks without a material image to carry the thought. Implying that there exists a place in the mind where creativity takes place. Creativity is also different from the mental process of remembering or perception. Those processes require that something must already exist and that is not required of creativity” (Hays, 2017). While creativity needs remembering and perception to initiate the design process, creativity enables a BDS’s ability to look past basic functional requirements and find the hidden emotional essence of how humans interact with the built environment. Therefore, creativity is the keystone of resolving the gap between awareness and knowledge.

The object of this teaching forum is to nurture creativity in BDS by combining Baratto’s architectural illustration framework with concept development. Baratto’s architectural illustration framework consist of four primary ways to represent design intent: sketches (fast/expressive), models (volumetric composition), technical drawings (specific proportions), and rendering (design within a context) (Baratto, 2017).

Methodology:

1. Sketches: The concept statement (CS) is an adjective-based word pair (i.e., trust & strength) that requires a deeper empathy with the client (Caan, 2011). The CS must be focused on emotions. These insights, ordinarily obtained during initial client interviews, are gleaned from the assigned reading, Einstein’s Dreams (Lightman, 1993). Once they have determined their word pair, students sketch multiple 2D illustrations of their CS.

2. Models: Two types of models are used. a. Rip-n-tear models (RT) allows quick exploration of multiple iterations in 3D. RT models are simple to construct and edit. They are primarily centered around shape and form. b. Final models formally delineate all aspects of the design intent.

3. Technical Drawings: Students transform their rough sketches/RT into scaled drawings, focused on the details of their initial designs.

4. Rendering: These final drawings/models illustrate BDS final solution. Students prepare a “presentation cube” which shows their final rendered illustrations and protects the model during storage.

Analysis of Outcomes:

Benefits of framework: Creative thinking merged inside an easy-to-follow framework removes perceptions that creativity is only for gifted artists. Students develop abilities to create numerous ideas through multiple methods and critical analysis. Students’ work shows the importance of the integration of the design process, concept development, and architectural illustration to creativity. This multi-faceted design
process has become the norm for future projects.

Students’ comments include: “Being creative was not so scary after all,” “I think I can see my ideas in 3D now,” “Emotion in design is as important as function.”

References (APA)


Appendix: Examples of Student Work

Concept Statement: Word Pair Examples

Appendix Images: Einstein’s Dreams: Cultivating Creativity by Combining Baratto’s Architectural Illustration Framework, Dean Isham
Appendix Images: Einstein’s Dreams: Cultivating Creativity by Combining Baratto’s Architectural Illustration Framework, Dean Isham
Without light and lighting, interior design solutions are confusing paths that must be carefully navigated. Light and lighting reveal color, affect human behavior, create visual interest, and indicate direction of travel. Interior design educators include lighting content within courses to prepare their students for professional practice. The Council for Interior Design Qualification (CIDQ) begins their definition of interior design with the statements: “Interior design is a multi-faceted profession in which creative and technical solutions are applied within a structure to achieve a built interior environment. These solutions are functional, enhance the quality of life and culture of the occupants and are aesthetically attractive.” (Council for Interior Design Qualification, 2016). As interior design students matriculate through the path to professionalism, the NCIDQ exams, required for licensure and professional memberships, test them on a wide variety of lighting design knowledge and skills. The NCIDQ Practicum exam includes a component on lighting design application and both the Interior Design Fundamentals Exam and the Interior Design Professional Exam include questions on lighting consultants, lighting systems, sensory considerations, sources, fixtures, calculations distribution and color rendering (Council for Interior Design Qualifications, 2016).

Decisions on what should be included in a course are often and reasonably based on a current textbook (Weimer, 2014). When interior design educators identify a book for the lighting course, they need it to address a complete overview of the topic. This is critical in the case of lighting design due to the technical content of vision, behavior, sources, fixtures, calculations, energy management, building regulations, aesthetics, visualizations and documentation, and project management. Do the current lighting design textbooks include the content that helps educators prepare their students to become competent practitioners and pass the NCIDQ exam?

The research methodologies used to formulate the answer to this question were microanalysis and selective coding methods (Corbin et al., 2008). The lighting content within the NCIDQ examination was identified using the microanalysis process of analyzing content within CIDQ’s prior exams offered to the public and the array of study materials offered by Professional Publications, Incorporated. The coding categories became apparent through the analysis of the most current lighting design textbooks (Gordon, 2015 and Winchip, 2017) published in 2015 and 2017. The textbooks’ chapter headings became the categories. The comparison of the data collected from these sources clearly indicated that technical content of vision, perception, color, sources, luminaires, systems, controls, calculations, and energy management were included. Also, the study indicated that content on aesthetics, visualization, manufacturers’ literature, applications, building regulations, documentation, specifications, project management, and working with allied consultants were not adequately included in one or both of the textbooks.

The presentation by experienced lighting design educators explains the study and the significance of the findings for educators teaching lighting, their students, and alumni preparing for the NCIDQ examination.

References (APA)


Pedagogical Mentorship: Elevating Educational Experience Through Practice Partnerships

Presentation: Scholarship of Teaching & Learning - Teaching & Pedagogy

Cathy Nowicki, High Point University
Kristi DeRoncey-Julian, East Tennessee State University

Professional Practice is an impactful educational asset. CIDA 2017 Standard 6 Business Practices and Professionalism requires that Interior Design programs provide interaction with practitioners to help reinforce the skillset and elevate the value of design education. Student opportunities for interaction may include mentorship, participation in professional organizations, directed internships, and work study. Each of these activities provide unique insight into the learning – practice dynamic, and provide a contextual framework for a multi-faceted teaching approach. Student projects and activities featured in this presentation demonstrate evidence of these engagements including: mentor posters detailing various practice types, requirements, and learned skill application, student centered activities sponsored by professional practice organizations, and feedback from internships and work study opportunities. These career opportunities provide pathways between learning and doing, and assure that students understand accepted standards of practice, are ready to contribute to a variety of professional work environments, and are aware of the interrelationships that influence design, design responsibility, and ethics (CIDA Standard 6 Intent, 2017).

References (APA)


Strategies for Transformative Retail

Presentation: Scholarship of Design Research – Sustainability

Juliana Burbano, Savannah College of Art and Design
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The United States has one of the highest rates of consumption compared to other countries in the world. Unsustainable consumer patterns create a negative impact on the environment and in our society; therefore, this problem must be addressed. Thankfully, there are many sustainable systems and design solutions that have been developed to reduce buildings’ environmental impact, though the role of occupant behavior is not commonly considered in the design of built environments. It is important to understand which variables affect behaviors, particularly in retail stores, and how customer behavior can be effectively altered. This thesis studies how retail design could influence consumer behavior to be more environmentally positive and socially significant. The literature review included the theoretical frameworks of Experience and Transformation Economy, Pro-Environmental Behavior theory (Social Cognitive Theory), and Prahalad and Ramaswamy’s (2004) suggested the theoretical model for value
co-creation consisting of four building blocks—dialogue, access, risk, and transparency (DART). The literature review was conducted to identify potential links between these theories, and determine how to use those links to positively affect consumer behavior. This process suggested that transformation economy provides a point of intervention and an opportunity to intervene in retail stores using knowledge, learning, and long-term thinking. Transformation only occurs when the customer has a meaningful experience that changes their perspective of the world. A survey was conducted to confirm that holding pro-environmental attitudes does not necessarily lead to pro-environmental behaviors. This is commonly referred to as the “value-action” gap. The survey asked the responders about their consumer behaviors and preferences, as well as their environmental awareness and attitudes towards product lifecycles. Survey results confirmed that the majority of individuals have positive intentions and preferences, but they do not always act accordingly. Some large global retailers are creating human rights and sustainability standards for their products and supply chain. Patagonia is a good example and was therefore used as a case study. For this analysis, DART model elements were compared to understand how they are affecting both physical and virtual environments. This analysis suggested that there are interior design gaps that allow the formulation of a new model of a retail store. Exhibition design tools were used to provide focal narrative points where the customer could have their own immersive and educational experience related with each type of learner (i.e., aural, visual, read/write, and kinesthetic). These in-store experiences are staged to guide and educate customers while they visit the store. As a design proposal, the user transformation was composed by the following elements: Awareness (risks/benefits), Understanding (supply chain, materials, stories, and products), and Taking Action (repair, reuse, recycle, and intervene in the supply chain). In that way, the customer will be able to change his/her behavior towards creating a positive social and environmental impact.

References (APA)


Our discipline <education and profession> continues to elevate the level of design discourse in the built environment. That discourse is increasingly augmented by what we teach future designers about the inclusion of environmental-responsibility, social justice, evidence-based design, health, and global issues.

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