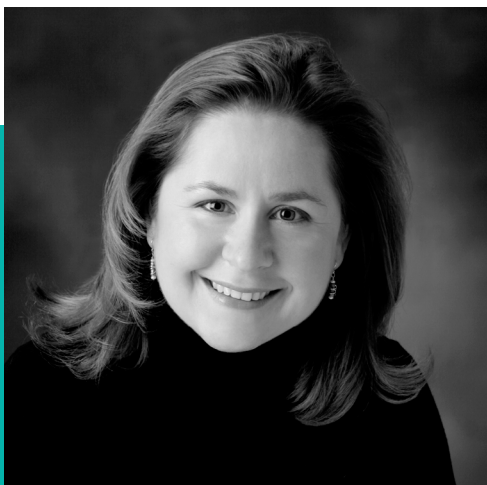




# EXCHANGE

a Forum for Interior Design Education

SPRING 2016



# MESSAGE FROM THE PRESIDENT

Migette Kaup, PhD, IDEC

**C**onference is always so energizing, and, our time in Portland was certainly packed with notable events.

Many of our members were in attendance, but conference is certainly not the only venue that our members can find IDEC of value to their careers. As I addressed the conference attendees at our closing luncheon, I shared some thoughts about how we continue to grow as an organization, and how as educators, we continue to make significant impacts on the profession. For those who were not at the luncheon in Portland, I'd like to share these thoughts with you as well.

IDEC is made up of talented people who have made design education their careers. And being a design educator is certainly very different than only being a practitioner. We have to know about the world of practice, and, we have to know about the world of the academia. Where our footing is placed between these two worlds may vary, but one thing I firmly believe is that being a design educator is a distinct and unique profession, and, it sometimes isn't acknowledged or celebrated enough.

Being an educator of any kind is a complex proposition with increasing demands on our time and our resources. The students we teach today also come to us with incredibly diverse needs, different learning styles, and a host of other "issues" that sometimes make us feel like we should have all gotten minors in clinical psychology and counseling. I often smirk when someone quips "well, out here in the 'real' world.... I want to say, darling, it doesn't get any more 'real' than in our classrooms, but I just smile and get back to work.

The expectations for our academic positions may also vary, for some of us our primary charge is to teach, delivering the body of knowledge in our classrooms and helping students to understand the amazing careers they are headed for. For others of us, we are also expected to add to that body of knowledge through our research and scholarly

activities. Additionally, many of us have the opportunity to apply knowledge by taking our students out into our communities to serve through the application of design.

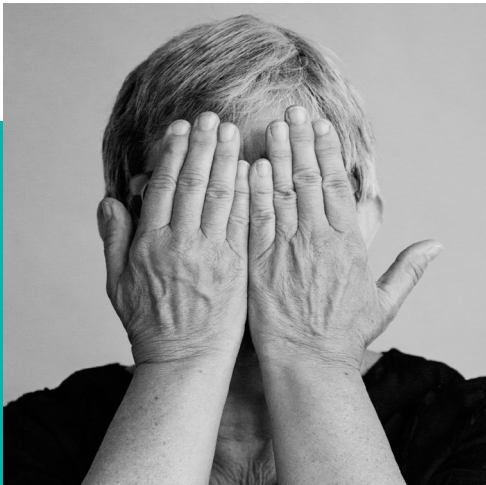
We do all of this because we have a calling to make a difference and, more importantly, we have the **knowledge** to do so. We give something to the profession that which only educators can really do well; we prepare students to become practitioners. Let's face it, who can really argue the fact that great design careers start with great design education and the educators who deliver it.

The knowledge of design is so powerful, and IDEC is made up of the educators who teach it, the scholars who seek it, and the academics who use it to serve others. Today, we know that the value of education can sometimes be questioned for its expense, the length of time it takes, and the value that it provides to the consumer, our students. I'm sure that we're all likely feeling the squeeze from various constituencies to do it faster, cheaper, and still with measurable outcomes.

IDEC should be your source of support for many of the tools and resources that you need. This year the board will be focused on how to continue to advance those resources for design educators and design scholars that provide you information as well as the necessarily rigorous forums for you to disseminate your work.

IDEC brings you value to your dossier, it is a place to connect, network, forge partnerships in pursuits of knowledge about all things design. As we look at the year ahead, stay connected with us, look for the calls, share your accomplishments, and submit your work. We want you to be recognized for the quality you bring, because next March 8 - 12, IDEC Chicago will be **a celebration of design, research, and education.**

*Migette Kaup, PhD, IDEC  
President*



# MESSAGE FROM PAST PRESIDENT Cynthia Mohr

**A**s we enter to the last part of your academic year or term, it is appropriate to reflect upon the many accomplishments that have been made this year that support our efforts as educators and design scholars. For IDEC this has been a year of new offerings that support the work of our members that has generated a spirit of excitement. For the many members who were able to attend the regional or annual meeting we all found a variety of presentations that we can bring back to our institutions and classrooms. If you were not able to attend these sessions, you will find access on our web site to presentations and networks that can support your work as you begin planning for the next academic year.

This is time of change within higher education and many of our institutions are facing challenges that will reflect on our ability to deliver the high quality programs that we work so hard to create. We are also facing societal issues that may affect our universities and students. Our Core Values outline the importance of a foundation in ethics and encompasses environmental, cultural, social, and global issues and the participation of diverse groups of people. It is a time to stand tall, to defend our programs and students. Interior design

does matter and our contributions and the graduates of our programs can and will be agents whose efforts will support the improvement of the environment for all of us where we live and work.

It was my honor to lead this incredible group of member volunteers. Our organization is strong and stable. This is due to our board, our members, and our management company, Kellen. I know that as Migette Kaup steps into her position as President, and Doug Seidler as President-Elect the momentum will continue. I want to urge you to become involved with IDEC, to become an active part of moving our association and profession forward. The rewards are great and strengthen us as individuals and as an organization. There are many different levels of participation available. Contact your regional chair or a member for the board to identify an appropriate opportunity.

It was an exciting year for me as your President and I want to thank each of you for your efforts to ensure that IDEC stays the leader in ensuring that *Interior Design Matters*.

*Cynthia Mohr,  
IDEC President, 2015-2016*



# MESSAGE FROM EDITOR-IN-CHIEF

## Clay Odom

**G**raeme Brooker challenged us with his keynote address, Pecha Kucha Night explored both the theatrical and serious sides of scholarship, and the range of presentations from Robotics and Spatial Practices, to Social and Environmental Scholarship continued to excite us with questions and projects which continue to expand and critically challenge the discipline. In short, this describes my experience at this year's IDEC National Conference held in Portland. But most importantly these few days of scholarship, discussion and even fun describes why Interior Design Matters and what matters to us as educators and scholars.

These questions are explored further in this issue of the IDEC Exchange where we continue to provide a platform for educators to showcase what matters to them. It is individuals who make up IDEC, and individuals who will continue to shape its future. However, it is through events such as the IDEC National Convention and publications such as this where we collectively begin to see the contours of the present and future shaped through shared discourse, scholarship and pedagogy. It is here where we celebrate both the stuff of Interior Design and its importance as scholarship, pedagogy and practice. Ultimately, it is here where both the 'matter' of Interior Design and what 'matters' to it as a discipline are defined.

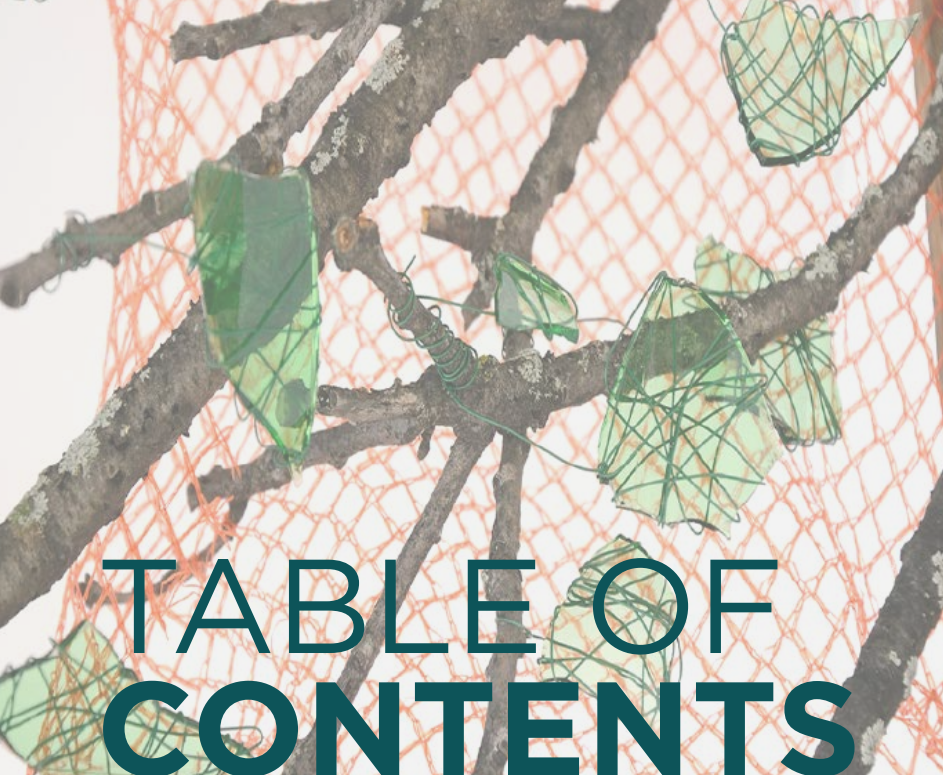
I am thrilled with the quantity and quality of submissions this Spring. I look forward to growing the Exchange and providing an ever more rigorous

platform to explore these and other issues facing the practice and teaching of Interior Design. That said, the IDEC Exchange could not happen without fantastic support from a range of dedicated people. First, our graphic designer Ryan Foster and Amy Clarke Sievers from IDEC are so incredibly hard working and helpful throughout the long process of putting this publication together. This product would not be possible without their diligence and professionalism. Our current associate editors Jane Nichols, Bryan Orthel, and Sarah Urquhart continue to provide thoughtful content while also reaching out to our community to grow the Exchange. Finally, I have to thank both Cynthia Mohr and Migette Kaup who have been incredibly supportive of the endeavor to explore new ways to present and celebrate the work of IDEC community.

Finally and most importantly, I'd like to thank you for the submittals and for sharing your work with us. I'll look forward to hearing from all of you in the IDEC Community as we continue to provide and develop the IDEC Exchange as an increasingly critical forum to share your scholarship, teaching and service stories.

Cheers,

*Clay Odom  
Exchange Editor-in-Chief  
Assistant Professor  
Interior Design Program, School of Architecture  
The University of Texas at Austin*



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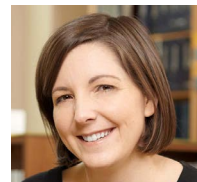
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High Point University



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PREMIER PARTNERS



**CET**Designer

Cover image: 'Examples of light screen studio project'  
submitted by Joori Suh, Iowa State University



# 2016 SPRING IDEC EXCHANGE THEME

## Interior Design Matters

*Interior surface installation for a classroom and meeting space designed to positively impact acoustics and indoor air quality.  
Credit to: Assoc. Prof Tamie Glass and Asst. Prof Clay Odom. University of Texas School of Architecture Interior Design Program*

**T**he call for the spring 2016 issue of the IDEC Exchange follows closely on the theme of the IDEC National Conference 'Interior Design Matters'. This can be seen as an encompassing yet crucial statement of why Interior Design Education is important. However, it can also be seen as call, asking us to consider what we do as Interior Designers and Interior Design Educators. What matters to us a field and as individuals working to shape the field now and what might matter to us we consider the future of the discipline as both pedagogy and practice? Potentially one might also begin to ask other questions. For example, as a spatially focused practice, what is the 'matter' that Interior Design leverages and manipulates?

The IDEC Exchange is focused on providing a platform for innovative and critically focused projects and research that engage these questions through rich and rigorous investigations. What are current practices and methods that have the potential to generate the matter and space of Interior Design within the classroom, scholarly research, and creative practice? The Exchange is interested in celebrating projects that not only demonstrate innovative outcomes, but that also push forward concepts, processes, approaches and methodologies as the matter of Interior Design.



# IDEC NEWS

## IDEC NATIONAL CONFERENCE AWARDS

### 2016 CREATIVE SCHOLARSHIP WINNERS

**Design as Art:** *Built Drawings* - Deborah Scott

**Design as Idea:** *Six Board Chest Project: Experiments in Open Making* - Linda Zimmer

**Design as Interior:** *Something Old, Something New* - Brian Kelly

### 2016 AWARD OF EXCELLENCE WINNERS

**Best Presentation - Teaching + Learning:** *Using an Unmanned Aerial Vehicle (UAV/drone) to Improve Student Engagement with Building Construction, Systems, and Codes* - Nathan Bicak

**Design Research:** *Evaluating Living and Learning on Campus: Beyond Twin Beds and Communal Showers* - Rebekah Ison Radtke

**Poster:** *Design Thinking: Providing Opportunity for Underserved Communities with the Design Discipline* - Jessica Walton

**Members Choice:** *Let's Build a Cathedral Together: Improv, Collaboration, and the Design Process* - Roberto Ventura

### 2016 SCHOLARSHIP AWARDS

**Community Service Award:** *Calming Space Project at Bruce Vento Elementary School in St. Paul, MN* - Abimbola 'Aby' Asojo

**Merit Award:** *Journal of Interior Design* - Jennifer Webb

**Scholarship Excellence:** *Identifying and Examining Micro Physical Environment Factors Contributing to Patient Falls* - Pati Debajyoti

**Book Award:** *The Healthy Indoor Environment: How to Assess Occupants' Wellbeing in Buildings* - Philomena Bluysen

**Media Award:** *A Conversation with Architect Ralph Fournier* - Jessica Senne and Jonathan Fahnestock

**IDEC Foundation Special Projects Award Winner:** *"TECHNO-SPATIAL ENGAGEMENT: Interior Infrastructures of Technology for the Seniors of Houston's Fifth Ward* - Ziad Qureshi

## 2016 SERVICE RECOGNITIONS AND AWARDS

**IDEC Fellow Recognition:** Cynthia Mohr

**Teaching Excellence Award:** Miranda S. Anderson and Jay Pengilly

**Presidential Award:** Kathy Ankerson - Outgoing Past President

### **Service Recognition**

Presentation Review Coordinator - Amy Crumpton

Proceedings Coordinator - Tina Sarawgi

Creative Scholarship Coordinator - Deborah Schneiderman

Awards Chair - Susie Tibbitts

Grants Chair - Amanda Gale

Student Design Competition Coordinators - Jessica Goldsmith and Meg Konkel

## 2016 STUDENT AWARDS

**JID Graduate Research Award:** Elizabeth Calienes - University of Florida

## VIDEO COMPETITION

**1st Place:** University of Oklahoma including: Ashley Kime, Kylie Cowan, Paige McCumber, & Sarah Flottman  
For "Turning on the Green Light"

**2nd Place:** University of Arkansas - Fay Jones School of Architecture - Department of Interior Design, is  
Isaac Boroughs' video titled "Solutions for People: Interior Design"

**3rd Place:** Florida State University including: Sofia Bodewig, Cara Carne, Jeremy Sackler, & Dana Trezek;  
titled "Interior Design is More Than You Think"

## IDEC FOUNDATION GRADUATE SCHOLARS

Jack Kennedy - University of North Carolina at Greensboro

Anna Osborne - Florida State University

Catherine Turgman - Georgia State University

## 2016 IDEC STUDENT DESIGN COMPETITION:

### **Graduate Winner:**

First Place: Shared Spaces

Students: Katherine Looney, Suzanne Merlino, & Yaman Sokienah

Faculty Advisor: Lindsay Tan

Auburn University

### **Undergraduate Winners:**

First Place: THE BRIDGE

Students: Kristin Begin, Samantha Haff, & Marina Hauner

Faculty Advisors: Michelle Lafontaine, Manon Pace, Tiia Manson, & Kathryn Lange

British Columbia Institute of Technology

Second Place: Social Learnex

Students: David Ramos, Chantel Mah, & Yvonne Lum

Faculty Advisors: Michelle Lafontaine, Manon Pace, Tiia Manson, & Kathryn Lange

British Columbia Institute of Technology

Third Place: Playscape

Students: Fiona Chang, Lucine Lu, & Melody Giang

Faculty Advisors: Michelle Lafontaine, Manon Pace, Tiia Manson, & Kathryn Lange

British Columbia Institute of Technology

## SPECIAL ISSUES FOCUS ON DESIGN AND CULTURE, HEALTHCARE, AND CREATIVE SCHOLARSHIP

**T**he Journal of Interior Design is pleased to announce the call for the 2018 Special Issue: Elocutions, Elaborations and Expositions of Interior Design Creative Scholarship. Guest edited by Julieanna Preston (Massey University, New Zealand), this issue welcomes visual essays and design research papers that embrace, demonstrate and test these ambitions as elocutions, elaborations or expositions, in other words, via

contributions that render new insights to the creative work and tell new stories. Both modes of contribution focus on a creative work or set of creative works specific to interior design and include a written text that operates to support, expand and question the creative work, reveal its underpinnings and speculate upon what unforeseen understandings and sensibilities the work pries open as new knowing. The call can be accessed at [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1939-1668](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1939-1668)

in the left hand menu under Special Features.

The call for the 2017 Special Issue, Design for Healthcare: Nurturing a Systems View of Design Process and Product (edited by Sheila Danko and Mardelle Shepley), is still open, but will close by May 1. Finally, the 2016 Special Issue, Design + Culture (edited by Tasoulla Hadjiyanni) will be published in September of this year.

## GRADUATE RESEARCH AWARD

**E**lizabeth Calienes, doctoral student at the University of Florida, was the recipient of the Second Annual Graduate Student Award. Ms. Calienes was praised by the anonymous reviewers not only for the content of her research but for her articulate presentation and enthusiasm for the work. Look for her future successes as an interior design scholar.

## LEADERSHIP TRANSITIONS

**T**he Journal of Interior Design celebrates its board members and editors during the upcoming transition period. Associate editor Bridget May will step down following two terms. During her time with the journal, she not only mentored writers but also served as guest editor for special issues on design history. Her expertise and dedication to scholarly writing will be missed. Jennifer Webb, current chair of

the Journal's Board of Directors, will step down following two terms as chair. Caroline Hill will assume this leadership role following a successful term as board director. Also joining the board is Lisa Tucker. These leaders bring critical experiences to the journal during a time when scholarly publishing is transitioning rapidly.



**P**ortland delivered a much needed charge to the IDEC Networks. From the flair to the Happy Hour to the Town Hall, Networks were the buzz at this year's conference. For those of you who may have missed the events in Portland, here is the latest look at the state of the IDEC Networks.

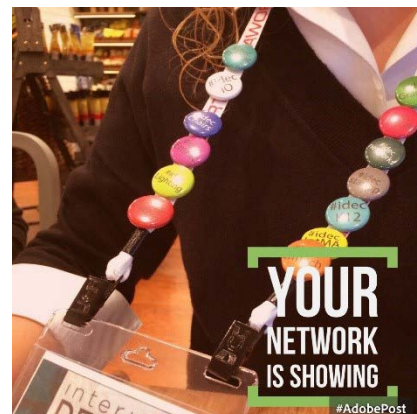
Members from each of the existing 11 Networks were represented at the conference, and 2 additional Networks were added at the Network Happy Hour. The newest Networks to emerge were Gerontology, Chaired by Hepi Wachter, and 2-3 Year Programs, Chaired by Laura Kimball. These and all established Networks will be represented on the IDEC website with access to updated membership lists and their accompanying hashtags identifying where to follow specific Network happenings on Twitter and other social media.

Network happenings will be featured throughout the year in the IDEC Exchange and eNews as we highlight the many efforts, initiatives, and competitions hosted by various Networks in an effort to keep our membership connected between conferences.

IDEC Networks have a great deal to offer their members and the IDEC membership at large. While some are dedicated to collaborative teaching and research

opportunities, others are attuned to the future of the interior design profession, or fostering growth within our own organization. Whatever your interests, the Network events in Portland proved that you need not look far amongst our ranks to discover someone holding the key to the information you seek, or to find a kindred spirit waiting to support you through your next goal. Keep up with ongoing Network communications and collaboration through the Twitter feed #idecnetworks and on our website.

For a complete list of Networks visit <http://www.idec.org/i4a/pages/index.cfm?pageid=3293>. Don't see what you are looking for? Consider starting a new Network! No formal process needs to be followed to form a network and as few as three members can advocate and create a Network. So don't hesitate! Contact us at [info@idec.org](mailto:info@idec.org) for further details.





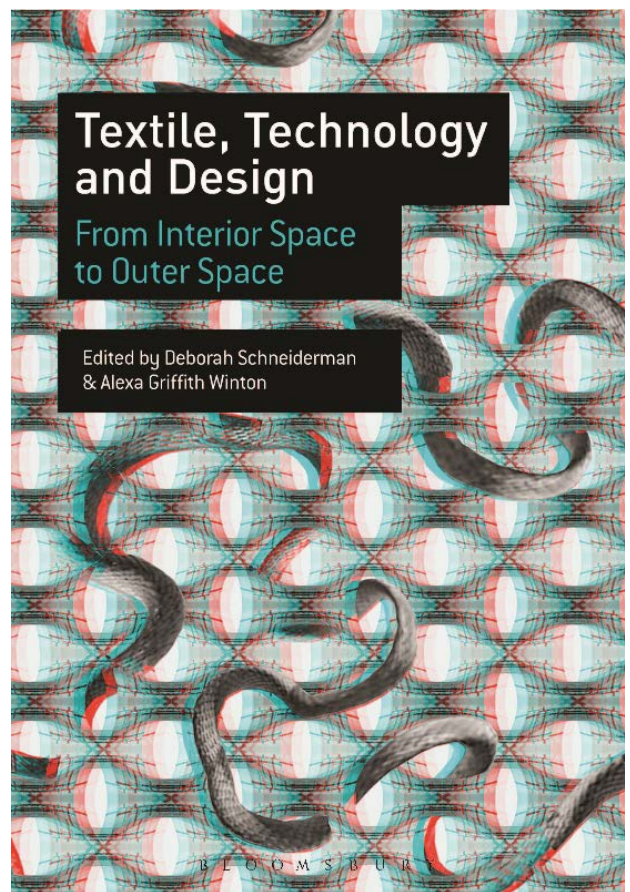
# PUBLICATION REVIEW

## TEXTILE TECHNOLOGY AND DESIGN: FROM INTERIOR SPACE TO OUTER SPACE

Textile Technology and Design: From Interior Space to Outer Space edited by Deborah Schneiderman and Alexa Griffith Winton addresses the critical role of the interior at the intersection of design and technology, with a range of interdisciplinary arguments by a wide range of contributors: from design practitioners to researchers and scholars to aerospace engineers. Chapters examine the way in which textiles and technology – while seemingly distinct – continually inform each other through their persistent overlapping of interests, and eventually coalesce in the practice of interior design. One of the chapters and the book cover look at the manipulated surface and 3D wallpaper and are best viewed with 3D glasses.

*The following text is excerpt from the introduction to the Book.*

Textile Technology and Design: From Interior Space to Outer Space offers 17 newly commissioned essays and interviews from design practitioners, scientists, and scholars and an astronaut addressing the critical role of the interior at the intersection of design and technology, providing a range of diverse and interdisciplinary arguments around this concept. The volume is divided into three distinct yet interconnected sections, with the essays in each addressing critical aspects of each area of investigation. The first section “Textile: Pliable Planes, Interior Applications and Fabrications,” explores the role of textiles within the context of interior design and architecture. The second section, “Mechanical and Digital Innovation in the Interior Realm,” looks at a broad spectrum of technology as they relate to the interior. The third section, “To Outer Space,” explores the roles of textile and technology in the design and inhabitation of extreme environments.”





# IDEC COMMUNITY ARTICLES

## IT RAINED IN PORTLAND

SUBMITTED BY: BRYAN ORTHEL, ASSOCIATE EDITOR  
ASSISTANT PROFESSOR, KANSAS STATE UNIVERSITY

**I**t rained in Portland. Of course. We expected it to rain in Portland. We came prepared with jackets and umbrellas. When we ventured out of the hotel for a meal or to explore the unique culture of Portland, we shared our umbrellas.

The 2016 conference challenged us to think about how big the interior design umbrella should be. In scholarship sessions, the keynote address, and many conversations, I heard colleagues talking about the matter—the content, the stuff—of interior design. Sometimes they agreed.

In the conversations between sessions, colleagues tracked down a presenter to learn more about an idea or to exchange success stories about a teaching technique or research method. In these conversations, there was optimism about making interior design better. There were also conversations with concern about whether a presentation fit into the body of interior design scholarship. Given the theme and character of the conference, these later questions intrigued me. How far is interior design willing to stretch? When does interior design simply become design? When is the umbrella too small to cover more than one?

At the town hall session, several people spoke about the language we use to describe what we do as interior designers and educators. Do we teach skills? Do we train

our students? Do we educate students to think, to make, or to handle specific tasks? Are we designers or educators first?

I enjoyed the rain. The exchange of worthy ideas invigorates and presents clean, new approaches.

At the same time, the ways we talk about interior design and our disciplinary scholarship need refreshing. As educators, how can we revitalize and energize the scholarship that we present? How can we persuade rather than report? How can we teach enthusiastically rather than be the teacher from Peanuts?

As designers, how should we broaden what is rightly interior design's matter? How should our scholarship and creative work improve the world?

As an organization, how can IDEC encourage a bigger umbrella? What disciplinary boundaries should we be willing to cross temporarily to create a rich dialogue? Who should we invite in?

It rained in Portland. We had the opportunity to hear many perspectives. How many did we choose to listen to? What did our umbrellas protect us from?

# ACCESSORY DWELLING UNITS: IN YOUR BACKYARD?

SUBMITTED BY: JANE NICHOLS, ASSOCIATE EDITOR  
ASSOCIATE PROFESSOR, HIGH-POINT UNIVERSITY

**W**ith the U.S. population of elderly citizens doubling by 2040, there is an impetus to create affordable and accessible housing alternatives that can facilitate the majority of seniors who want to age in place, and an incentive for communities to investigate the addition of Accessory Dwelling Units (ADU's) in their strategic housing plans. The ADU is a unique housing type that can support aging in place (Chapman & Howe, 2010). It may be an accessory unit on the resident's property as an addition or as a separate and detached structure, sometimes referred to as a granny flat, carriage home or casita, or, it can be separate housing units that lie within the single-family home. Many suburban homes contain surplus space that the elderly resident no longer requires, which can be retrofitted to generate rental income that may help the residential senior remain in their home longer. For the elderly homeowner or tenant, maintaining habitation in the same neighborhood can provide continuity that prevents the severing of personal connections and potential loss of social capital built over years.

Communities take different approaches to ADU's, but too often local government creates barriers to the development of ADU's through zoning restrictions. Suburban development following WWII favored owner-occupied, single-

family detached dwellings, and that exclusionary policy framework remains (Nichols & Adams, 2013). Local zoning codes often restrict the addition of dwellings on existing single-family lots, and officials are reluctant to approve new accessory units. Neighbors may perceive an ADU as potentially lowering property values, impacting neighborhood character, adding pressure on schools and utilities, and increasing parking density. Public hearings can initiate NIMBYism and community discord (Liebig, Koenig & Pynoos, 2008), which often dissuades residents from even exploring potential ADU alternatives for their home or lot. Some cities limit the number of ADU permits allowed each year, while others restrict ADU's to minimum lot sizes or mandate that the unit must be attached to the primary residence (Groc, 2008).

The most important and attractive features of an ADU are privacy, accessibility and affordability. For the senior on a fixed income, housing options are limited and subsidized senior housing waiting lists are long and disconcerting. The single-family home that no longer serves an elder's needs because it is too large, requires too much maintenance and consumes expensive energy resources may also isolate the senior, making her a prisoner in her own home. Partitioning the home into multiple residences or building an accessory unit on the property generates revenue



and may alleviate the burden of housekeeping and yard-work, with potential for sharing utility costs, repairs or transportation. Additionally, ADU tenants can sometimes provide the elderly resident with a sense of security and companionship.

The ADU rarely dramatically changes the integrity or texture of a neighborhood. The impact to dwelling density is minimal, and the stability it can bring to communities may be significant (Brinig & Gamett, 2013). Homes and lots that are more efficiently utilized have a better chance of surviving economic downturns and maintaining steady ownership. There is little that degrades a neighborhood faster than foreclosures, vacant homes and deteriorating lots. The addition of Accessory Dwelling Units in a community's strategic housing plan may enable senior citizens to age in place in their current homes, and can also provide new accessible and affordable housing for elderly residents.

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# MIXED REALITY LAB: INTERIOR DESIGN MATTERS ON TEACHING, RESEARCH AND COMMUNITY OUTREACH

SUBMITTED BY: TILANKA CHANDRASEKERA, PHD

ASSISTANT PROFESSOR, OKLAHOMA STATE UNIVERSITY

Interior Design matters have evolved through the years, and this evolution has brought about an increase in the use of digital tools in interior design and interior design education. These tools have been commonly used as, representation, collaborative and communicative media. Among the various digital tools, Virtual Reality (VR) has been used more commonly in the design domain. More recently, the use of Augmented Reality (AR) and Additive Manufacturing (3D Printing) has increased as well.

Interior Design matters have focused on Teaching, Research and Community Outreach and the Mixed Reality Lab at Oklahoma State University was established to address these areas. The lab focuses on teaching, research as well as community outreach related to interior design through the use of technology. Currently the Mixed Reality Lab is equipped with a projector based Passive 3D stereoscopic VR system, multiple VR Head Mounted Display systems, multiple AR Head Mounted Display systems, 3D body /object scanning capabilities, 8-Camera Motion Capture system, multiple 3D printers as well as a collaborative design console.

Within the collaborative design console, designers are able to collaborate on a design projects. The interactive touch sensitive whiteboard provides the center point while other computers are connected to the central computer. Using the Virtual Reality (VR) area researchers as well as students are able to simulate 3D virtual environments in passive stereoscopy. The multiple VR head mounted display systems have also been used for students to experience the spaces they design as well as for research purposes. Students have used the 3D printers for class projects and usability studies of using 3D



printers have been conducted and presented at IDEC conferences in the past. Mobile based and PC based AR technology has also been used by students in their class projects to showcase their design products.

There is a critical need in educating the public and future generations on what the Interior Design profession is, and how it benefits the public's health, safety, welfare, and quality of life. In order to connect with the public through the lab's resources we annually conduct workshops for Grandparent University and 4H roundup (Which are campus wide events where the public participate in different workshops). Research carried out in the lab ranges from technology related research on older adults, technology use in design education and design practice. For example in one of the current projects, we are looking at how virtual reality can be used in assessing the cognitive load imposed by color and texture in hotel rooms.

# ALTERNATE PATHWAYS TO INTERIOR DESIGN EDUCATION

SUBMITTED BY: LAURA C. KIMBALL, INTERIOR DESIGN PROGRAM COORDINATOR, COMMUNITY COLLEGE OF BALTIMORE COUNTY

**W**ith rising costs of tuition and supplies, student loan debt and an uncertain job market, college students face a myriad of decisions that impact their ability to attend and succeed in Interior Design degree programs. Associate-degree schools, primarily Community Colleges, offer a localized and affordable college experience, which is becoming a necessity for many college-bound students. These two-year programs also attract and meet the needs of a diverse student population. This path to a professional interior design career must be valued alongside four-year programs. IDEC can support the larger interior design profession through recognizing the variety of educational paths which students take.

An IDEC core value states: “We believe a successful interior design education depends upon the participation of diverse groups of people” (idec.org). That statement includes the overall interior design student body. Diversity is not only found in socioeconomic, cultural and ethnic classifications but also in age, gender, experience, and professional background. These characteristics add to the body of knowledge and bring a variety of collaborative viewpoints to solve interior design problems.

Two-year programs offer multiple paths to interior design education and appeal to diverse student circumstances. Completing an Associate degree and directly entering the workforce is an option for some, especially for those changing careers or reentering the workforce with or without a previous degree. Students

with previous Bachelor or higher degrees may transfer or later apply to Master degree programs. Unfortunately students seeking to transfer to Bachelor degree programs face limited and challenging transfer options. Transfer agreements serve as valuable recognition for two-year schools and offer students further educational and professional opportunities.

Identifying two-year interior design programs is difficult. On IDEC's website the Find an Interior Design Program page only lists graduate programs for potential educators. The Member Directory, listing members' affiliated schools, is limited to member-only access. CIDA lists pending and approved four-year and first-professional master programs with no option for accrediting or listing transfer programs. NASAD offers a broader scope of accreditation; however, searching is limited to schools not disciplines. Without listing alternative paths to interior design education, we are limiting diverse populations from participation and the overall value of interior design education.



Interior Design does matter and Interior Design education matters. One of the ways we can support those statements is to provide well-educated interior designers for every marketplace. There is not one-type of interior designer nor is there only one-way to become one.

# MIND THE GAP

SUBMITTED BY: DANA VAUX, ASSISTANT PROFESSOR OF  
INTERIOR DESIGN, DEPARTMENT OF FAMILY STUDIES AND  
INTERIOR DESIGN UNIVERSITY OF NEBRASKA AT KEARNEY



In the subways of London, the cautionary phrase, “Mind the Gap,” warns passengers to watch their step as they transition from the subway platform to the train.

In recent decades, the interior design discipline has worked hard to “mind the gap,” addressing “the need to bring industry, practice and education into better alignment.”(2) As interior design continues to define and ensure its future in the design industry, we must also continue to “mind the gap.” Among others that might be identified, consider the following issues impacting our profession.

1. Designers are now dealing with a more educated client. Customizing design outcomes to fit the client/user needs is commonplace, but also more difficult. Clients and users often vary and may do so at a global scale. Adding to the complexity of meeting client needs are issues surrounding the global marketplace and expectations of socially and ecologically responsible design. A gap often exists between what the design-savvy client/user “knows” and what the designer understands as “good design.” Designers must assume the role of design educator and practitioner in order to bridge the gap.
2. As design firms and projects move towards interdisciplinary collaboration, the silos between design fields are coming down. Interior designers need to mind the gap on two fronts with this issue. In education, we need to ensure that our students speak the many languages of our allied fields and

truly understand the gap we fill in the collaborative process. In practice, as we stand up for the role interior design adds to collaborative processes, we need to remember to be team players. We can learn from industrial designers such as Tim Brown of IDEO, who are changing the industry from the inside out in a bi-partisan manner.

3. Finally, interior designers need to address the gap between what we know and what we do. At the beginning of the 20th century, electric engines powered more automobiles than gasoline. The Ford Motor company's first prototype for the Model “T” included an electric engine for city driving or a gasoline engine for country driving. (3) Similarly, many sustainable practices relative to interior environments, such as fresh air ventilation from open windows and sourcing products locally, fell out of use as our ability to meet the need artificially became technologically feasible. With this in mind, interior designers need to remember what we once knew and bring it forward.

As we transition to a future where it becomes common knowledge that interior design matters, we will be well served to “mind the gap.”

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# CUBA: TRAVEL

SUBMITTED BY: MELISSA SANTANA, ASSISTANT PROFESSOR  
- INTERIOR DESIGN / FACULTY ADVISOR, ASID, NORTHERN  
ARIZONA UNIVERSITY

**A**ssistant Professor, Melissa Santana, took 9 students on a life changing study abroad experience this past spring break. It was Northern Arizona University's first ever trip to Cuba which began on March 12th and ended two days before the arrival of President Obama, on March 18th. This unique, 1-credit class focused on architectural history and historic preservation in the city of Havana. Students met with architects, preservation experts, city officials and toured numerous buildings, like the art deco former Bacardi Headquarters and McKim, Mead, and White's, Hotel Nacional. Havana is an excellent location for these types of studies, not only because it's a UNESCO World Heritage site, but also because you can stand in one spot and see a 17th century building next door to an art nouveau structure, that is also next to a very modern glass and concrete building. One can take in over 500 years of architecture in as little as 200 blocks within this magnificent city. So instead of just seeing these historical designs on a power point or in pictures, students could experience the architecture first hand. In turn, experiencing these architectural masterpieces, some fully restored, others in shambles, showed the students what a direct role architecture and design has to do with cultural heritage, and why preserving these structures and rehabilitating them into new uses is important for city's identity. After meeting with professionals in the field, as well as exchanging in meaningful interactions with the Cuban people, students realized how political their field really could be. One particular seminar with Cuban architect, Miguel Coyula, touched the student's hearts when he showed a picture of Shanghai. He said "This is no longer a Chinese city, but just a city in China. This is not what we want for the Cuban people". Students saw how Havana is alive with culture, history and pride and how architectural designs play a pivotal role. While relationships are improving between the two countries, we are at a "wait and see" position. Only time will tell whether or not American businesses and developers will respects and restore the city's heritage.



# CLIENT CENTERED DESIGN

SUBMITTED BY: DAK KOPEC, DIRECTOR, DESIGN FOR HUMAN HEALTH,  
BOSTON ARCHITECTURAL COLLEGE

People's conceptualization of health and healthcare has been evolving at a rapid pace. Evidence based practices have replaced intuition, holistic practices have permeated nearly every segment of society, and there has been a shift from top-down services to client centered. However, our environments are only considered peripherally within the healthcare process.

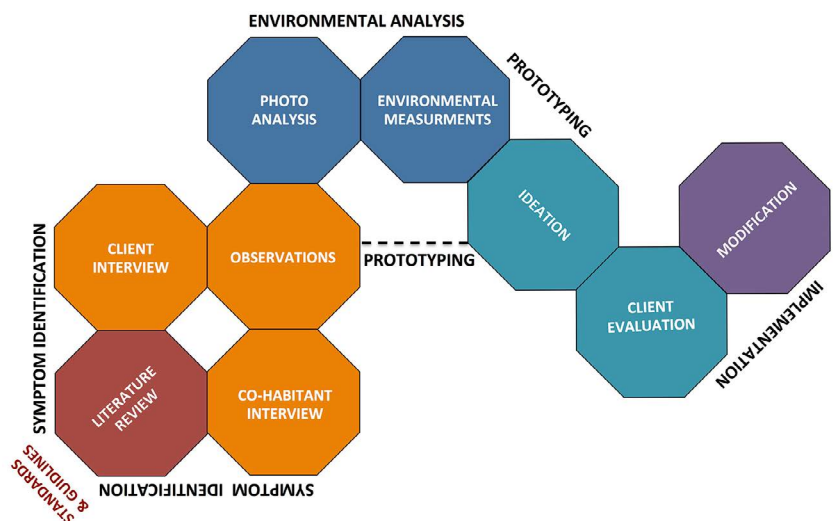
Universal Design and Aging-in-Place are movements based on replicable principles applied to a wide variety of spaces. Conversely, Client Centered Design is a reliable model based on individuals and their specific needs. For example, each person who has suffered from a stroke will exhibit symptoms differently. Symptoms are dependent on where the stroke occurred, how severe it was, and the damage to the respective portion of the brain.

## Process

Client Centered Design begins with a literature review of common standards and guidelines in relation to general symptoms associated with the issue of concern. This information is distilled to reveal specific human-environment relationships between symptoms and design features that are further assessed through observational interviews.

The client and cohabitants participate in the observational interviews while the designer concurrently observes the client's behaviors. The person-environment interactions of the client, reported observations of the client by other inhabitants, and observations of movement patterns and environmental uses are emphasized in this phase of the process. Data is then used as part of the environmental analysis where the environment is measured and photographed.

Data obtained from the literature review, observational interviews, and environmental analyses are then triangulated to inform the ideation process. A fundamental premise of Client Centered Design is the transfer of control from the designer to the client. Hence, three or more ideations are developed and presented to the client and cohabitants. With final decisions coming from the client and cohabitants, the challenge for the designer is to ensure that individual



elements complement and support the totality of the design. Implementation of the approved design is the final phase.

## Implementation

This Client Center Design process has been used in two cases with success. The first was a group home for developmentally disabled seniors. In this case there were a total of four clients and two cohabitants. One of the clients was nonverbal thus, limiting the interviews to the remaining three clients. The second case was a private residence of an older man who suffered a stroke between the right temporal and occipital lobes. The first case was more difficult because of the number of clients, their intellectual disabilities, and tight budgetary constraints. The second case was easier because only the client and one cohabitant occupied the home, they both embraced the process, and funding was not a significant concern.

## Conclusion

A Client Centered Design process affords creative solutions such as the use of four vertical stainless steel stabilizing bars that echoed midcentury design styles in the home of a person who suffered a stroke or, the repositioning of a closet to serve an abutting room, as opposed to the room of a person with Alzheimer's. Likewise, this process affords the design and development of custom furnishings that better support the occupant needs. Client Centered Design is too specific to be replicable, but its approach and benefits better meet the qualitative needs of the clients.

# EMBRACING RISK OR: HOW WE LEARNED TO STOP WORRYING AND LOVE WICKED PROBLEMS

SUBMITTED BY: KEVIN H. WOOLLEY, PH.D., ASSISTANT PROFESSOR INTERIOR DESIGN, VIRGINIA COMMONWEALTH UNIVERSITY QATAR

E. JOHAN GRANBERG, PH.D., ASSISTANT PROFESSOR INTERIOR DESIGN, VIRGINIA COMMONWEALTH UNIVERSITY QATAR

“Wicked problems are too messy and complicated for student designers to deal with.”

**A**t least that's what we thought until we realized that wicked problems have immense potential for self-improvement... and they are all around us! Design problems, by definition, are subjectively vague with no right or wrong answer, i.e. “wicked.” In our research, we have discovered two types of approaches students use to overcome the fear of complex ‘wicked’ problems: explorative and investigative. “To explore” and “to investigate” are synonyms in English grammar; however, if we trace their Latin etymology we find slight differences between the two terms. ‘Explore’ connotes an action instigated by the operative agent whereas ‘investigate’ infers a reaction in which the agent follows a definitive path or procedure.

In the world of crime fiction these two attitudes can be characterized by Dashiell Hammett's Sam Spade (explorative) and Arthur Conan Doyle's Sherlock Holmes (investigative). Sam Spade explains his method in *The Maltese Falcon*, “My way of learning is to heave a wild and unpredictable monkey-wrench into the machinery.” Sherlock Holmes method is data collection personified. His meticulous powers of fact finding inevitably lead to solving the crime. We believe that both, i.e. to heave a monkey-wrench or collect all the data before starting, are necessary approaches for embracing risk.

A. Explorative processes fit better to situations that reward autonomy, risk taking, and latitude for creative freedom.

B. Investigative processes fit better to situations that require greater definition, procedural development, and creative competency.

Each of these approaches help explain how designers navigate uncertainty. The following ideas show how ‘exploration’ and ‘investigation’ can be utilized to navigate wicked problems.

## **Students Must Experience Wicked Problems.**

Wicked problems force students to adapt proper tools and proficiencies into a coherent strategy to resolve higher-level, complex problems. What we have learned



from wicked problems is to take risks and try out different solutions.

## **Freedom Is Critical For Intellectual Growth.**

Creativity is not a specialization that can be learnt solely by saying to students “Be creative!” Becoming a creative designer involves freedom and emancipation from the behavioral notion of pleasing the professor. Levels of curricular freedom must be tempered with the ability (and maturity) of each class as well as each student.

## **Adaptive Teaching/Learning Is More Than Grading Projects.**

Adaptive teaching is a flexible, student-centered pedagogy where learning is not narrowly focused on specific learning objectives or predetermined outcomes. This can be viewed as ‘cognitive recycling.’ What we really want is ‘cognitive upcycling’ which forces the student to consider the consequences of the design act from various viewpoints. This means using multiple assessment methods in order to see beyond project outcomes to determine if the student “got it.”

Telling students to embrace risk is not enough. Experiencing explorative and investigative design processes will increase cognitive coping skills that can be utilized to manage the riskiness of any ‘wicked’ problem. As the teacher innovatively adapts the curriculum to the setting, students will begin to adapt their abilities to the complexities and consequences of interior design.

# CREATING SAFE ENVIRONMENTS FOR SEIZURES

SUBMITTED BY: LEE DAVIS, ASSOCIATE PROFESSOR

KENDALL COLLEGE OF ART AND DESIGN, FERRIS STATE UNIVERSITY



**A** recent collaborative design project brought together the Spectrum Health Innovations (SHI) team with industrial and interior designer students from Kendall College of Art and Design (KCAD). The Epilepsy Monitoring Unit (EMU) is a specialized area where seizure patients check in and voluntarily go off their medications with the hope of having seizures while in the hospital. This procedure - to date - has meant confining the patient to the bed for days at a time, waiting for seizures to occur.

The Spectrum Health team, led by Dr. Vladimir Shvarts and Dr. Mohamad Haykal, are exploring new equipment that will allow patients to more easily get in and out of bed, move around the hospital room, and perform day to day activities. This will alleviate some of the boredom that patients face when confined to a bed for days, when they are otherwise healthy and not in need of constant bed rest, and it will allow the patients to participate in some stress-inducing activities - such as working remotely - which might also induce their seizure.

All of this technological innovation directed the team to re-evaluate the hospital rooms that these patients are confined to during their stay. Because these patients aren't "sick", could they house them in a space that felt less like a hospital, and more like a hotel? And could they make this environment safe for a seizure that could include a fall? This brought the KCAD and SHI team together to collaborate on a 30 week project that spanned both the fall and spring semester of an academic year.

Students started by observing those working in the EMU. They were able to shadow nurses, EEG technicians, physicians and patients. They saw the current equipment, learned about the response protocol for seizures and now understand better how confined and bored the patients can get while waiting in the hospital for their seizures to occur. There was a fall "spark" session with several staff members where the student teams were able to facilitate brainstorming and patient empathy collages. After this session, the student team went to work addressing the current room layout and identifying how to design the space in a way that would meet the

staff needs, but also give the patient a safe place to move around, work and be with family and friends while in the hospital.

Students went through sketching exercises, planning exercises and material research. They examined the needs of the patients and their families, the nursing staff, the physicians and the technicians. Current furniture in the room was deemed "too hospital" and a new patient bed and multi-function chair were proposed by the industrial design team. A response cart was designed to house the computer, oxygen tank and suction equipment so these things could be hidden away until needed. The overall aesthetic of the room was changed by incorporating built-in cabinetry and new material selections that would allow the patient to fall when seizing, but avoid serious injury. Graphic elements were added to the windows so that light and shadow could be harnessed to produce geometric shapes on the walls and floor that might induce a seizure. The final design is being mocked up by the students and SHI team for evaluation, with future implementation the goal.

# “DOMESTIC GROUNDS”, FLOOR SURFACE ERGONOMICS

SUBMITTED BY: NEREA FELIZ, ASSISTANT PROFESSOR  
INTERIOR DESIGN PROGRAM, THE UNIVERSITY OF TEXAS SCHOOL OF  
ARCHITECTURE



“..Beginning as highly coded, decorated, and staking the claim of civilization of the raw ground, the floor has progressively gained complexity in section (false technical floor) in inverse proportion to the simplification of its surface details.”<sup>1</sup>

**T**he standardization of buildings components has often led to the gradual homogenization and banalization of the floor plane. The fact that in most cases the design of floor finishes, and interiors surfaces, has moved hands from designers to manufacturers, has frequently reduced the practice of Interior Design to the selection of standardized finishes from a catalog. It is critical that within the field, we persist inquiring about the essence of these surfaces to continue to improve their performance.

The floor negotiates between gravity and the upright body, it happens to be the only architectural surface that we are constantly in direct contact with, and yet, when addressing the design of the floor plain, tactility rarely constitutes a design parameter. Every step we take is linked to this surface. Domestic Grounds seeks to disclose the possibility for tactile stimulation of floor design. Just as standing desks and kneeling chairs are questioning body posture and challenging the notion of comfort strongly associated with ease and softness, domestic grounds explores the potential for interior finishes to also perform at an ergonomic level by actively engaging our feet and body muscles with the production of a hard landscape to walk on.

Arriving home and taking off our shoes is not a random

impulse. Walking barefoot is an ancestral human experience. In the shoeless paradise of the domestic environment, alternating rugs, wood boards and tiles: softness and hardness, warmth and cold, the floor plane is already a celebration of tactility. There are multiple therapeutic advantages to walking barefoot on uneven surfaces, such as: reduced blood pressure, stimulation of the immune and lymphatic systems, toning core muscles, and lower anxiety levels among others.<sup>2</sup> In fact, this is a very common practice in China and Taiwan, where many parks include cobblestone reflexology paths. According to the National Institute of Health, on average most sedentary individuals take from 1000-3000 steps per day. A lot of this walking can take place in the domestic environment, given that walking barefoot on the street can be a dangerous activity on many levels, the goal of Domestic Grounds is taking full advantage of our household walking routine to invigorate our damaged feet.

This is the work of an ongoing material investigation initiated as a moderate imprinted concrete topography and resulting in a tessellated wood floor covering. The design was first modeled digitally and later crafted into a full scale prototype of a portion of the full proposal. Ergonomic principles informed the geometry. The abstract pattern, is composed of three different

sized units ranging from ¼" to ½", corresponding to the ranging scales of the feet's sensory capability. In words of Winston Churchill: "We shape our buildings; thereafter they shape us." Tactility in the floor plane delivers instructions to the body that need not to be translated into language, inducing rather than telling. Domestic Grounds advocates for a carefully designed and controlled return to our pre-shoe, barefoot walking origins. Reconsidering the way we apply material and form in the design of floors and floor coverings, can

radically increase the performance of these surfaces to include restorative properties and amplify the sensory experience of domestic circulation.

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## UNLEASHED: THEME PARK EXPERIENCE DESIGN

SUBMITTED BY: ROGER VITELLO, ASSISTANT PROFESSOR / PROGRAM COORDINATOR, INTERIOR DESIGN - SCHOOL OF ART - COLLEGE OF ARTS & LETTERS, NORTHERN ARIZONA UNIVERSITY

"Creativity is Intelligence having Fun" - Albert Einstein

Interiors are the leading edge of the "Experience Economy." The user's experience is now central to the process of making decisions about volume, color, materials, lighting and furniture. The capability of interior architecture to convey messages and stories about spaces will build on brand identity, not only in retail and hospitality environments, but across the spectrum of interior settings. Data-mining and application of research will increasingly guide design decision-making, enabling the designer to understand the role of cultural and economic variables. (Crandon Gustafson)

#### The Opportunity:

This project came about because we had a class of students interested in a career in set design. I saw this as an opportunity to explore new boundaries of interior design in a studio class project setting. In addition, this was a commercial project sufficiently challenging for the seniors taking the studio class to benefit.

#### The Goal:

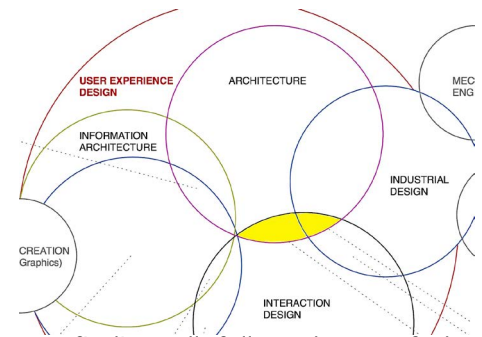
I wanted to create a senior studio project that would engage students and their interests, while connecting to professional interior design themes. The intent was to challenge students' imagination and invention in designing spaces, structures, materials, and

lighting, and to look beyond what has been done in various theme parks and build upon those to create special solutions.

#### The Strategy:

A project was devised in which the students create an experience in a theme park setting, a psychological "trip" that the visitor will feel as they encounter each part. Assignment: Find a movie, comic book, superhero, book, video game, or toy, and design an experience that captures the essence of those characters. Your attraction needs to convey the characters in such a way that persons unfamiliar with them will be attracted and want to learn more. It must be an attraction where the reality is a fantasy, not just a ride unless it is a means to move through the attraction. Ideally, it would stimulate the emotions of the participants.

Instead of using conventional bubble, block and adjacency matrix diagrams, I introduced the class to the concept of an Interaction diagram as a way to illustrate and plan their experience sequences. The diagram models the dynamic aspects of a system including complexity and sequence. This created an opportunity to design the experience structure from the inside out, as it all comes out of the interior process. Building systems, egress,



way-finding all followed out of the student's central idea. From an idea to a plan to reality, the students enclosed and shaped space in the process.

Students were divided into teams of 3-4 and asked to brand their section of a theme park, while each developed a specific experience. Solutions were evaluated on how well the branding carried through all of the team's experiences. This mimicked the client expectation in the profession that work produced by a team should appear consistent, as though from a single hand.

#### Findings:

Teams were required to plan and present a collective large scale visually arresting presentation similar to what might be required in a competitive design setting in the profession. This project choice brought together the best of creative enactment in a way that illustrated the primacy of interiors for interactive spaces.

# GRAFFITI WALL - NONCONVENTIONAL RESEARCH METHODS TO INFORM DESIGN DECISIONS

SUBMITTED BY: S. RAY-DEGGES, ASSOCIATE PROFESSOR & INTERIOR DESIGN PROGRAM COORDINATOR, DEPARTMENT OF APPAREL, DESIGN & HOSPITALITY MANAGEMENT, NORTH DAKOTA STATE UNIVERSITY

Students were solicited by the campus student union director to develop design recommendations for new interior furnishings, signage, and a proposed color palette that would be phased into the student union over the next ten years. Due to time constraints and the need to collect information from various campus constituents, senior interior design students collected data through a modified graffiti method to inform their design recommendations for the campus student union.

Exploring current design trends in higher education and student unions, the senior interior design students developed a series of image boards to be used in tandem with the graffiti method. The boards focused on proposed furniture design solutions, signage to enhance wayfinding, color palettes representative of this upper Midwestern university, and regional imagery to be shared with the campus-wide audience for public comment.

Using a large moveable wall systems, graffiti walls were created to develop a public venue for campus constituents to share their voices in the design process. Image board groupings along with large post-it easel pages and attached markers formed the foundation for the graffiti wall. The graffiti walls were left in place for three days in the student union's primary

circulation corridors that serve as the main axis point for the campus. To help encourage participation in a public venue, guiding questions were placed above or beside image groupings. Students, faculty, and staff could write comments directly on the pictures, place small post-it notes on their preferences, or write comments on large post-it easel pages. This large amount of white space beside the visual images, as well as the flexibility of small post-it notes, offered many opportunities for contributions from the campus community to participate.

This method introduced students to a qualitative asynchronous data collection approach that allowed them to gather information from a large, diverse population in a public forum (Hanington & Martin, 2012). As noted on Figure 1, comments ranged from positive reflections on the imagery provided, "copycat" comments, to disagreement on how money was spent at the university for refurbishing university spaces. Some participants brought entire sheets of notebook paper and attached them to the wall, in response to the solicitation of information.

Students collected the data from the walls and consolidated the information to look for common themes and patterns that resulted in a final list of design recommendations. Reflecting on

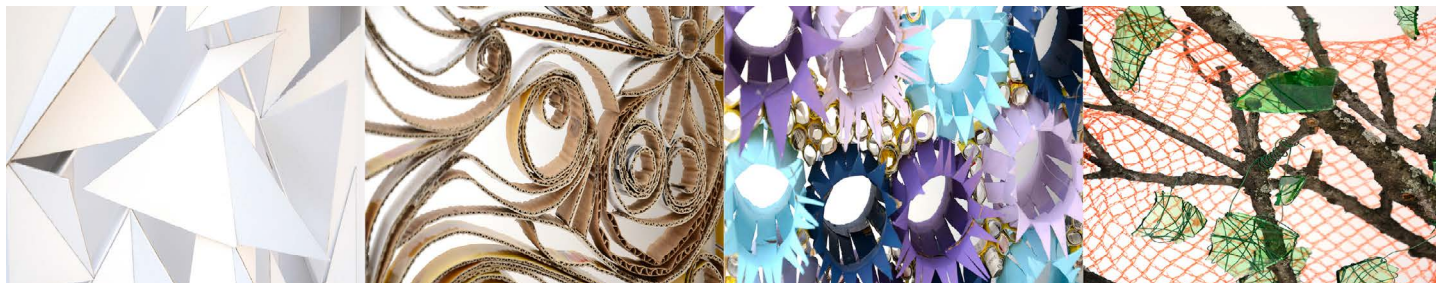


this learning experience, students found this method to be somewhat intimidating as there was little control over how participants interpreted the information or if they had a clear understanding of how the information was being used. However on the flip side they found the exploratory nature of the process to be rewarding. The vast range of comments collected in such a short time frame, both positive and negative, offered them excellent baseline information in developing guiding design recommendations.

Hanington, B. & Martin, B. (2012). Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions. Beverly, MA: Rockport Publishers.

# PRO-ENVIRONMENTAL BEHAVIOR SENSE MAKING FOR BEGINNING INTERIOR DESIGN STUDENTS: LIGHT SCREEN PROJECT

SUBMITTED BY: JOORI SUH, ASSISTANT PROFESSOR, DEPARTMENT OF INTERIOR DESIGN L 158 COLLEGE OF DESIGN, IOWA STATE UNIVERSITY



**R**esearch has shown that environmental knowledge has only a small linkage to pro-environmental behavior (Kempton et al., 1995). Sustainable design education based on knowledge-based content has essential value in providing relevant information applicable to students' future design practice; more importantly, however, educators must find creative ways to influence students' integral value system so that it can ultimately help students develop an environmentally responsible judgment appropriate for dynamic future context. How can interior design educators surpass the limitations of training students to be mere LEED advocates and instead ignite an intrinsic aspiration within students to become sincere environmentally sensitive designers?

## Up\*cycle Me!

Fuhrer et al. (1995) claim that a person's values are influenced by the microsystem of one's immediate social network such as family, friends, colleagues, etc. As Kollmuss and Agyeman (2002) discuss, in order to establish a new pro-environmental behavior, it is critical for students to practice the new behavior in their everyday life until it becomes a habit. In this article I introduce a pro-environmental design project, titled "Up\*cycle Me!" which is designed to provide students with personal hands-on experiences within the realm of microsystem and enables beginning interior design students to experience the following benefits: (1) encourages students to develop personal pro-environmental behaviors; (2) inspires students to be inventive in using waste; (3) fosters exercise of three-dimensional design exploration; (4) redefine aesthetics from the perspective of sustainable design. The project has been included as part of class activities and assignments for the basic interior design lecture course, "Fundamentals of Interior Design."

## The Rules

The fundamental concept of the project was built mainly based on Benyus' (2002) suggestion of using waste as a

resource, one of the ten principles of living harmoniously with the nature. The project starts with an introductory discussion session about a philosophical approach to sustainable design, environmental concerns, limited resources, and creative inventions using salvage materials. Students start the project by collecting abandoned items, garbage, scrapes of studio materials, or waste from their daily life such as bottle lids, beverage can pop tabs, items from packages, ice cream sticks, etc. Using the collected items, students are asked to design a three-dimensional light screen device that could filter sunlight and cast shadow patterns. The rules include the followings: (a) the entire object including the frame must be made of abandoned or waste items; (b) the items must be repeated to form three-dimensional meaningful and artistic patterns; (c) the pattern must create multiple layers that would increase the depth perception and three dimensional aesthetics; (d) the device must not block the view completely.

## Reflections

Students' personal reflection descriptions demonstrate that the project was useful in that it positively changed their concept of pro-environmental behavior from someone else's job to something tangible and viable in each individual's daily life.

Figure 1. Examples of Light Screen project from 2015 Fall

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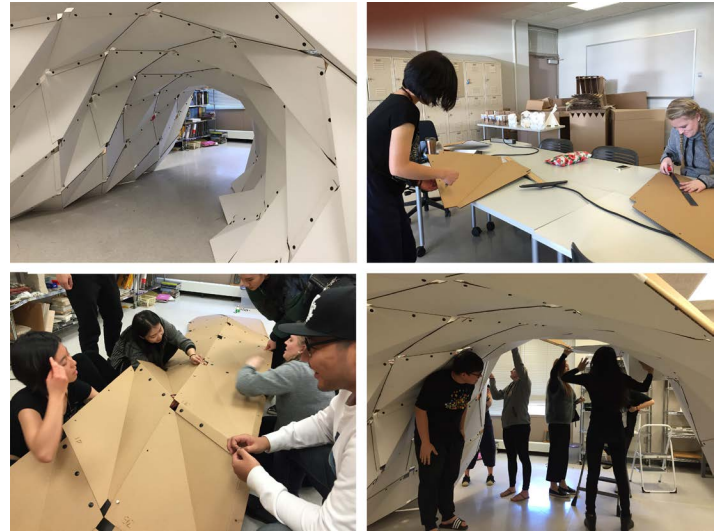
# MATERIALIZATION MATTERS: WEEKEND WORKSHOP ON DIGITAL FABRICATION AND INTERIOR DESIGN

SUBMITTED BY: JIANGMEI WU, ASSISTANT PROFESSOR,  
INTERIOR DESIGN, INDIANA UNIVERSITY

**T**his one credit hour weekend workshop introduced design students to tools, work-flow, and considerations in digital fabrication and its creative application in contemporary interior design. In recent years, the culture of custom digital fabrication has heavily influenced the practice of architecture, interior design and design pedagogy. The focus of the workshop was to materialize a digital design to a 1:1 scale interior skin installation as a group. The learning goal of the workshop was to understand the basics of work-flow and considerations between digital design and physical making in the context of large-scale installation. Besides the hands-on making and learning, the students also had the opportunity to visit an industrial-scale fabrication shop, Noblitt Fabricating, in Columbus, Indiana.

The central project of this workshop was that of working on the latest iteration of Ruga Interior Skin, an ongoing research and creative scholarship by Jiangmei Wu, assistant professor at Indiana University. Ruga Interior Skin (RIS) explores the ambiguous and conceptual realm connecting wearing and inhabiting and its relationship between body, form, material and surface making of a novel interior semi-structural wall and partition. 'Ruga' is the Latin word for making wrinkles, creases, pleats and folds. RIS is inspired by the use of wrinkling and folding to create flexible frameless topological forms that can be suspended in a way that is similar to a piece of cloth or textile. The free-form geometric surface is inspired by Yoshimura folding pattern and was modeled in Grasshopper and Rhino before the workshop by Professor Wu. It is made up of 68 unique pieces of cardboard panels, fabricated by Noblitt Fabricating in Columbus, Indiana. These cardboard panels then needed to be folded and connected to form a large semi-structural interior skin that stands about 8 feet in height, 15 feet in width and 12 feet in length.

Because of the free-form geometric design, these 68 unique panels could not be all connected in flat surface. The only way to connect these panels was to hang connected pieces sequentially in segments and to allow the gravity to fold the pre-scored mountain and valley crease lines while connecting each segment using rivets, nuts and bolts. This hands-on experience



therefore required the students to self-organize and to draft a system to facilitate the production and assembly workflow as a group. While this process proved to be a very difficult task, the students in the workshop were enthusiastic. Many of them expressed their preferences to active and hands-on learning through making than other forms of learning.

Eleven students, mostly junior and seniors, started organizing themselves by different fabrication tasks, including scoring, folding and connecting, and hanging. Because of the efficient organization, all of the 68 unique pieces of cardboard were folded and ready for assembly and installation in two hours. Students then devised a numbering system on the drawing to organize and connect the panels in segments to be hung and to be further connected (figure 1). Despite many obstacles due to material strength, assembly details, and integrity of folding the large interior skin installation was completed in three hours.

# GAPS IN SOFT SKILLS OF NEW INTERIOR DESIGN GRADUATES AND POTENTIAL EMPLOYMENT

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**K**eeping abreast of the changes in skills desired by potential employers is an ongoing challenge in all fields. Gaps in those skill sets can produce a ripple effect in any industry. This study looks at the interior design industry and whether the undergraduate curriculum is keeping up with the skills desired by potential employers who require employees to have a bachelor degree in interior design. Undergraduate interior design program directors want their programs to be well known for the employment-ready graduates they produce, and that their students possess the skills requested by potential employers in the interior design field. This study uncovers the soft skills perceived as most important for new interior design graduates to possess, as surveyed by those that work alongside them. This study also uncovers the gaps in non-Council for Interior Design Accreditation (CIDA) required soft skills that the new interior design graduates are lacking. Interior design students spend four years learning how to communicate graphically; however, the results have gaps that potential employers feel are not being filled.

## Summary

In conclusion, research indicates that the first key finding in this study is that the sample surveyed placed equal importance on the top two skills “work in a team environment” and “prioritize to meet deadlines,” even though the first is included in CIDA and the latter is not (table 1). The findings in Professional Standards 2014 (Council for Interior Design Accreditation Professional Standards 2014) states the skills

required to be taught within accredited undergraduate interior design programs, one of which is verbal communication skills. Since “Verbal communication” is covered under CIDA accreditation, and shows a low mean relative to other scores it should be taken into consideration by universities and CIDA. The second main key finding of this study is that the two soft skills that are valued most for interior designers to have, are “Work in a team environment” and “Prioritize to meet deadlines” (table 2). Both of these topics score the same and the highest among the eleven topics. The first is covered under CIDA and the latter is not, highlighting that there is a skill perceived as important that CIDA is not covering and may not be aware of. A recommendation, therefore, is that CIDA revise their accreditation requirements to include “Prioritize to meet deadlines.”

Table 1

*Soft Skills Possessed by New Interior Design Graduates*

	N	Minimum	Maximum	Mean	Std. Deviation
Communicate design ideas*	106	10.00	100.00	66.5094	21.02345
Work in a team environment*	106	20.00	100.00	73.0189	21.95970
Verbal presentation skills*	106	10.00	100.00	59.8113	22.92768
Communicate in writing*	106	10.00	100.00	61.0377	24.53100
Problem solving*	106	10.00	100.00	63.2075	21.93267
Organizational skills.	106	20.00	100.00	62.9245	23.70320
Work on multiple projects at the same time.	106	10.00	100.00	63.9623	24.94486
Prioritize to meet deadlines.	106	10.00	100.00	61.8868	25.63900
Provide high level service to clients.	106	10.00	100.00	61.9811	24.55004
Motivated self-starter.	106	10.00	100.00	65.5660	22.89022
Willing to relocate.	106	10.00	100.00	53.7736	23.84285
Valid N (listwise)	106				

Notes: \*designates CIDA required skill.  
Yellow highlight designates highest possessed skills.

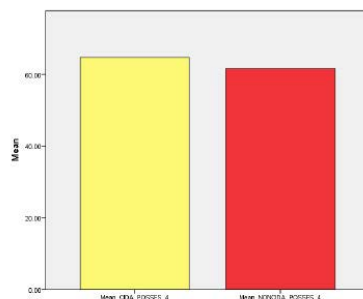


Figure 1. Mean of Skills Possessed: CIDA skills versus non-CIDA skills (as perceived by potential employers).

Table 2

*Interior Design Soft Skills Perceived as Most Important by Potential Employers*

	N	Minimum	Maximum	Mean	Std. Deviation
Communicate design ideas*	106	.00	1.00	.4811	.50202
Work in a team environment*	106	.00	1.00	.5849	.49508
Verbal presentation skills*	106	.00	1.00	.1887	.39311
Communicate in writing*	106	.00	1.00	.0849	.28007
Problem solving*	106	.00	1.00	.5000	.50238
Organizational skills.	106	.00	1.00	.3208	.46898
Work on multiple projects at the same time.	106	.00	1.00	.5000	.50238
Prioritize to meet deadlines.	106	.00	1.00	.5849	.49508
Provide high level service to clients.	106	.00	1.00	.2925	.45705
Motivated self-starter.	106	.00	1.00	.4623	.50094
Willing to relocate.	106	.00	.00	.0000	.00000
Valid N (listwise)	106				

Notes: \*designates CIDA required skill.  
Yellow highlights designate most important skills.

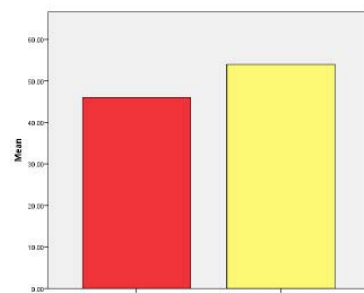


Figure 2. Mean of Most Important Skills: CIDA skills versus non-CIDA skills (as perceived by potential employers).

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