INTERIOR DESIGN EDUCATORS COUNCIL

PROCEEDINGS OF THE
SOUTHWEST REGIONAL CONFERENCE 2019
Waco, TX
OCTOBER 3-4, 2019

Conference Chair
Michelle Brown
Baylor University

Creative Scholarship Coordinator
Diana Allison
University of the InCarnate Word

Southwest Regional Chair
Amy Roehl
Texas Christian University

Best Presentation
Elise King
Baylor University

.
Best Poster Presentation
Debra Harris, Keyanna Taylor, & Katie Napierkowski,
Baylor University

Best Graduate Student Presentation
Luis Mejia,
Oklahoma State University

Lori Guerrero,
Texas Tech University

Best Creative Scholarship Presentation
Stephanie Zollinger,
University of Minnesota

Proceedings Editor
Suchismita Bhattacharjee
University of Oklahoma

Special Thanks

Sponsors

Baylor University
Office of the Vice Provost for Research

Baylor Interior Design Program
Department of Family & Consumer Sciences
Waco, TX

Arizona Tile, Dallas, TX

Wilsonart, Texas

Couristan, Texas

ASID Fort Worth, TX

ASID Texas Gulf Coast

IIDA Fort Worth

IIDA Texas | Oklahoma

TABLE OF CONTENTS

Oral Presentation - Scholarship of Design Research

An Exploration of Europe's Barefoot Parks: Possibilities for Applications in the U.S. 1
Amy Roehl 1

Baby Boomers to GenZ: A Comparative Analysis and Teaching Strategies for the Interior Design Studio 3
Michelle Pearson 3

Biomimicry and natural architecture: An approach toward sustainability in healthcare environments 4
Lori Guerrero 4

Design Archive + Oral History = State Treasure 6
Stephanie Zollinger 6

Design Professionals as Leaders in Childhood Health and Well-being 8
Kristi Gaines 8

Expanding Narrative Theory for Interior Designers 10
Ronnie Rama 10

Just Getting in: Equity in Historic Retail Settings 15
Jennifer Webb 15

Student's Preference of Design Mediums in the Design Process 17
Luis Mejia 17

Studio Z: Hybrid design studios that combine Virtual Reality and Rapid Prototyping 19
Tilanka Chandrasekera 19

The Building Database & Analytics System (BuDAS): Computer Science and Interior Design Take on 'Big Data' 21
Elise King 21

Oral Presentation - Scholarship of Teaching & Learning

A Social and Cultural Collaboration of Human Centered Design Across Campus 27
Suchismita Bhattacharjee and Tracy Howard 27

An exploration of wellness in the built environment: Redefining the college campus center to address a generation defined by direct communication and unique experiences 39
Lynette Panarell and Sylvia Masters 39

Bonjournal: Using a travel journal app to connect with peers and deliver course objectives 45
Heather Carter 45

Making Connections: Students, Faculty, Clients, Community 52
Valerie Settles 52

Teaching design principles and elements to Generation Z students through the American School Philosophy: An iterative design longitudinal case study between Bruce Goff homes and design/build furniture 59
Natali Ellis 59

The Beckoning Kitchen 66
Kathryn Brand and John Joseph Linn 66

The Readiness Assessment: An Alternative to Portfolio Review 73
Sally Swearingen, Joe Strahl, Mitzi Perritt and Leisha Bridwell 73

Understanding generation Z's learning preference: an exploration of Extended Reality based learning tool for the experience age 82
Zahid Islam 82

Poster Presentation

ADA Accessible Design Standards in Higher Education Indoor Environments 84
Nickole Henke, Elizabeth Pober, Suchismita Bhattacharjee and Tracy Howard 84

Designing for Generalized Anxiety Disorder: Interior Design Considerations and Guidelines for Future Research 89
Ashley Marino 89

Indoor finish material influence on contamination, transmission, and eradication of methicillin-resistant Staphylococcus aureus (MRSA) 90
Debra Harris, Keyanna Taylor and Katie Napierkowski 90

Interactive, project-based learning: A strategy for instructing and engaging Generation Z in design education 92
Judy Ruvuna 92

Smart Home Technologies for Aging in Place Home 94
Kelsey Mullins, Suchismita Bhattacharjee and Tracy Howard 94

Creative Scholarship

Accessorizing Space: Sculptural Awnings 95
Torrey Tracy and David Baird 95

Cruising at a Higher Altitude-The Generation Z Inspired Redesign of the Las Vegas McCarran Airport Interactive Exhibit at the Discovery Children's Museum 103
Torrey Tracy and Doug Walton 103

Jack Lenor Larsen at 90: Transformations by a Textile Innovator 111
Stephanie Zollinger 111

Space Prints: A Workflow 123
Torrey Tracy 123

An Exploration of Europe's Barefoot Parks: Possibilities for Applications in the U.S.

Amy Roehl
Texas Christian University
Fort Worth, TX

Contact with nature is necessary for human emotional and physical well-being and for healthy child development, (Louv, 2008) yet contemporary life dulls our senses, reduces our relationship to the natural world. Many buildings in the U.S. do not have operable windows. We spend our days literally sealed indoors. Our cars move us from indoor environment to indoor environment. School-age children today enjoy little outdoor free play. Ubiquitous engagement with digital devices and anxiety about the world outside our homes contributes to growing unease about the natural world (Louv, 2008). Considering these challenges, we must provide children with opportunities to connect their bodies with the world they move through. This paper introduces the European model of "barefoot parks" as a vehicle for engagement of the body with the nature and considers how this concept might be brought to the U.S. Barefoot parks, a growing recreational and health trend in Europe, provide possibilities for intentional interaction with natural and built environments. Unlike traditional hiking, barefoot parks require participants to take their shoes off and make contact with nature: foot to earth, foot to stone, foot to water and mud. Common components of barefoot parks include: "natural ground" paths (forest floor), "sandy ways", meadows (mowed for walking), varying grades (uphill, downhill), "sensation paths" such as wood, stones, and other loose materials, mud basins, balancing equipment, and resting stations (Kerschel, 2005). Historically, engaging the foot with the ground was the norm until the advent of the shoe estimated 40,000 years ago. With over 200,000 nerve endings in each foot, engaging the foot with the ground provides multiple health benefits including strengthening of the foot and leg muscles, improving blood circulation and posture (Kunz & Kunz, 2015). Bavarian monk, Sebastian Kniepp (1800s) contributed to Germany's history of naturopathic medicine by writing about the health benefits of barefoot walking. On the other side of the world, prevalence of reflexology paths in China in the late 1940s resulted from communist policy for preventative healthcare. Building of European barefoot parks, primarily in Germany and Austria expanded in the 1990s. Research for this study included formal literature review on the history of barefoot parks and health benefits of barefoot experiences. Internet research yielded information about quantity and extent of barefoot parks in Europe. A visit to a newly built barefoot park in Berlin provided first-hand experiences in addition to conversations with park employees, photography,

journaling and documentation of placards explaining the mind/body benefits of each experiential "station" (Der Barfusspark, 2019). This investigation serves as a prelude to a Fall 2019 service-learning project where interior design, graphic design, and dance students will collaborate to design and install an indoor sensory path in a local elementary school. Sensory events will be used as learning tools for children to engage with the physical world. As awareness increases in the child of their bodily relationship to the physical environment opportunities arise to discuss how we imagine the built environment should interact with humans and with the natural environment.

References

1. Kerscher, L. (2005). Design guide for barefoot parks. Retrieved from http://www.barfusspark.info/loesungsk/katalog_en.htm
2. Kunz, B. & Kunz, C. (2015). The reflexology research project. Retrieved from http://www.reflexology-research.com/?page_id=187
3. Louv, R. (2008). Last child in the woods: Saving our children from nature-deficit disorder. Chapel Hill, North Carolina: Algonquin Books of Chapel Hill.
4. Der Barfusspark Beelitz-Heilstaetten. (2019). Der Barfusspark. Retrieved from https://derbarfusspark.de/

Baby Boomers to GenZ: A Comparative Analysis and Teaching Strategies for the Interior Design Studio

Michelle Pearson

Texas Tech University

Lubbock, TX

Today's interior design studio represents an amalgamation of generations, resulting in complex social and educational dynamics. The majority of interior design professors today are from the baby boomer generation, though increasingly, they are joined by younger millennial colleagues. While the student population is becoming increasingly diversified, the majority (79.8%) of interior design students at CIDA accredited programs belong to GenerationZ (CIDA, 2018). GenZ is unique from its predecessors as the first generation to never experience life without the internet (Turner, 2015). In contrast to older peers and professors, GenZ students therefore often expect instant access to information and communication. This presentation therefore poses the question: how do generational differences in graphic, verbal, written, and interpersonal skills complicate instruction and learning in the interior design studio? And what may be appropriate strategies to build on the strengths of the multi-generational classroom? To answer this question, researchers conducted a thorough literature review on related topics including workplace design, learning styles, social interaction, and generational differences. A comparative analysis was conducted based on the literature to help understand the key differences and similarities among the generations. Additionally, strategies were developed for effectively delivering interior design education based on the findings. For example, while GenZ students prefer a technology rich environment, they also value face-to-face interaction and collaboration. They particularly thrive in classroom discussions and desire to be an active participant in the learning process. Knowing this, design educators can create projects in a way that give students opportunities to problem solve first in peer-groups and then allowing time for self-reflection and independent research. The implications of this research is far reaching and can serve as a resource for educators to understand their students and their preferred learning styles. Additionally, it could also serve as a resource for students to understand their non-traditional student peers and professors.

References

1. Survey Summary - Students (pp. 1-8, Rep.). (2018). CIDA.
2. Turner, A. R. (2013). Generation Z: Technology's Potential Impact in Social Interest of Contemporary Youth. A Research Paper Presented to The Faculty of the Adler Graduate School, 1-79.

Biomimicry and natural architecture: An approach toward sustainability in healthcare environments

Lori Guerrero
Texas Tech University
Lubbock, TX

This investigative study suggests that a sustainable building is a healthy building. Sustainable design and occupant well-being have received increased attention with a large focus on LEED and WELL certifications. What if we look past LEED and WELL to consider sustainability from a holistic viewpoint? What does nature teach us about sustainability and how can we implement it in a healthcare setting? In order to examine sustainable design solutions for healthcare, an existing medical clinic is reexamined with a new lens of improved sustainable design practices. A review of natural architecture, biomimicry and green energy sources reveals innovative, yet fundamental solutions. The study's 4-part method consists of: 1) a site analysis to reveal site-specific environmental and community challenges, 2) an examination of the biosphere, ecosystem, carbon cycle, water cycle and food chain, 3) a thorough review of natural architecture, biomimicry and green energy sources, and 4) ideation of design solutions to overcome site-specific challenges. Five challenges are identified through the site analysis: 1) wind, 2) dust, 3) water, 4) sun, and 5) infection. The review of biomimicry guides sustainable solutions inspired by cilia (Raffle, Joachim, & Tichenor, 2003), bee eyes (Chiadini, Fiumara, Scaglione, & Pulsifer), geckos (Izadi, Stewart, & Penlidis, 2014), lotus leaves (Forbes, 2008), and many others. The review of natural architectural systems (Suggs, 2016) indicates solutions such as ventilation, cooling, building orientation, water-harvesting and water-storage. The review of technological advances in green energy guides the selection of wind and sun energy as opportunities to transform negative challenges into positive solutions. The resulting design is reflected in the name "Hive Mind: A Bio-collective Initiative. Hive mind represents the ideology of members working together toward a single purpose. This is reflected in two approaches in the study: 1) the parts of the building working toward sustainability and 2) the members of the community working toward improved health. If selected for presentation the authors will expound upon the methodology, as well as discuss and illustrate the direct applications guided by biomimicry, natural architecture and green energy. Although this study focuses on a healthcare environment, the presented information guides a holistic viewpoint of sustainability applicable to all types of spaces.

References

1. Chiadini, F., Fiumara, V., Scaglione, A., & Pulsifer, D. P. (2011). Insect eyes inspire improved solar cells. Optics and Photonics News, 22(4), 38-43.
2. Forbes, P. (2008). Self-cleaning materials: lotus leaf-inspired nanotechnology. Scientific American, 299(2), 88.
3. Izadi, H., Stewart, K. M., & Penlidis, A. (2014). Role of contact electrification and electrostatic interactions in gecko adhesion. Journal of the Royal Society Interface, 11(98), 20140371.
4. Raffle, H., Joachim, M. W., & Tichenor, J. (2003, April). Super cilia skin: an interactive membrane. In CHI'03 Extended Abstracts on Human Factors in Computing Systems (pp. 808-809). ACM.
5. Suggs, A. (2016). Passive Cooling Strategies for Buildings in Utah (Unpublished master's thesis). The University of Utah, Salt Lake City, Utah, United States of America.

Design Archive + Oral History = State Treasure

Stephanie Zollinger
University of Minnesota
Minneapolis, MN

Imagine opening a brilliant designer's treasure chest, filled with his inspiration, innovation, and ideas about process. What would you explore, given access to the mind and accomplishments of the designer? How would understanding the origin of some of the most influential textile designs of the 20th century influence your own design decisions? With the Larsen Design Archive, you can seek those answers. The archive consists of more than 1,300 fabric samples and documents from his firm, held by a consortium of three academic and cultural organizations. The Archive is a resource for exploring the Larsen experience, and offers excellent potential for future teaching, learning, and design inspiration (Zollinger & Mayson, 2018) Jack Lenor Larsen was a trailblazer in America postwar modernism. He is one of the world's leading textile designers and producers, specializing in high-end fabrics for use in interiors. Larsen's company, Jack Lenor Larsen Inc., was known for innovative loomed fabrics, textured random-weave upholstery fabrics, grainy batiks, mohais, tufted leather rugs, velours, printed velvets, airy cottons, and Thai silks. Through pioneering designs, Jack Lenor Larsen Inc. set the standard for superlative textiles, winning numerous textile and design industry awards. Larsen textiles have been exhibited in museums around the world, including the Museum of Fine Arts, Boston, and Musée des Arts Décoratifs in Paris. They are in museum collections such as those of the Museum of Modern Art in New York, the Art Institute of Chicago, the Victoria and Albert Museum in London, and the Museum Bellerive in Zurich (Zollinger, 2014). An oral history project has begun to help the Larsen Design Archive come "alive." Oral history is being used to explore and document the success and collaboration of Jack Lenor Larsen. The oral histories are intended not only to fill an existing void in the literature but to go beyond the facts to explore motivations and influences, behind-the- scenes stories, and personal reflections. How did the company work? Why was this company successful when so many creative businesses failed the test of time? Each oral history preserves vial information and recollections from the Jack Lenor Larsen Studio and adds to a broader narrative about the totality of the man, himself- Jack Lenor Larsen. As a teaching resource, the archive and online availability of oral histories reflects the multifaceted character of design, encompassing the creative process, methods of production, marketing, and retail merchandising. Undergraduate students in design foundation courses have used the archive and oral histories to study Larsen's design process and concept development. Graduate students

have used the resources to gain a better understanding of the relationships between design teams and production sites, between a product and how it is marketed, and between an initial product and the licensing process (Zollinger & Mayson, 2018). What began as an informal, in-house preservation effort is now a well-preserved, accessible resource with the power to connect people and places globally and to demonstrate a relationship between individual design and the broader social, cultural, and economic spheres.

References

1. Zollinger, S. (2014). Advancing textile craft through innovation: The influence and legacy of Jack Lenor Larsen. *Craft Research*, 5(1), pp. 97-109.
2. Zollinger, S., & Mayson, L. (2018). The Larsen design archive: A Minnesota textile treasure. *American Craft Inquiry*, 2(2), 70-79.

Design Professionals as Leaders in Childhood Health and Well-being

Kristi Gaines

Texas Tech University

Lubbock, TX

Introduction This externally funded project is a collaborative effort between interdisciplinary design professionals, state agencies, childcare providers and child care licensing inspectors. Gibson's affordance theory provides the theoretical framework for this study. The goal was to create environments that afford opportunities for health, learning, and socio-emotional development through an evidence-based design intervention. The designers worked with early childcare providers to create outdoor learning environments that meet best practice design indicators and encourage children to be physically active. Research shows that an outdoor learning environment design strategy for childcare centers is associated with higher levels of physical activity and reduces sedentary behavior in preschoolers by 22% (Cosco, N. G., Moore, R. C., & Smith, W. R., 2014). The design team has been working for the past three years to implement this strategy in childcare centers in five different communities. Based on feedback from state agencies, childcare professionals, and designers, the researchers created resources to aid in the dissemination of the information. One of these design resources is an Inspector's Guide. Methods 1. The design researchers completed certification training in designing outdoor learning environments. 2. State licensing regulations were reviewed for compliance. The regulations are gathered from the following documents: 1) Minimum Standards for Childcare Centers (2018), 2) Minimum Standards for Childcare Homes (2018), 3) Texas Health and Safety Code Section 756.061, 4) Texas Accessibility Standards (2012), 5) Texas Rising Star Guidelines (2015), and 6) National Association for the Education of Young Children (NAEYC) Guidelines (2018). 3. Pre-intervention: site visit, focus groups, and interviews of administrators, teachers and staff. 4. Design Development: Workshops were conducted to bring together the design team composed of interior designers, architects, landscape architects and representatives from each child development center to create a site plan specific to each location. 5. A cost analysis was created and the design team worked with each center to prioritize and develop a plan for implementation. 6. Implementation of design 7. State agencies, childcare providers, designer professionals requested additional resources to replicate the process. 8. An inspector's guide was developed. Conclusions This guide is written for three groups of people: childcare providers, designers and child care licensing inspectors. For childcare providers, this guide serves as a resource illustrating the necessary safety considerations of outdoor learning environments. Childcare providers are responsible for the safety of their facilities. For design professionals, this guide will augment a

companion Design Guide to define necessary safety regulations of outdoor learning environments. While this guide offers the very basic safety requirements, design professionals are encouraged to implement research-based design theories and principles to create innovative solutions to strengthen childhood development in outdoor learning environments. For child care licensing inspectors, this guide will consolidate a list of familiar safety regulations that pertain specifically to the settings. Communication between all three groups of people is key to creating a safe space for early childhood development. An appendix is included to illustrate a small sampling of the content. The text and images are high quality in the original document and will be shown if selected for presentation.

References

1. Cosco, N. G., Moore, R. C., & Smith, W. R. (2014). Childcare outdoor renovation as a built environment health promotion strategy: evaluating the preventing obesity by design intervention. *American Journal of Health Promotion*, 28(3_suppl), S27-S32.
2. National Association for the Education of Young Children. (2018). NAEYC Early Learning Program Accreditation Standards and Assessment Items. 1-128.
3. Health and Human Services Commission. (2018). Minimum Standards for Child- Care Centers, P20330-0000, 1-222.
4. Texas Health and Human Services Commission. (2018). Minimum Standards for Child-Care Homes. P20329-0000, 1-219.

Expanding Narrative Theory for Interior Designers

Ronnie Rama
Abilene Christian University
Abilene, TX

Expanding Narrative Theory for Interior Designers Abstract Narrative Theory has been applied to understand the structural use and purpose of one of the most common aspects of the human experience; the telling of stories. Human beings have used and documented these narratives as a means to understand the basic aspects of our experiences. The theory itself is used to help study the nature, structure, features, applications and outcomes of narratives. Specifically, in teaching and sometimes the practice of Interior Design, certain aspects of the narrative theory have been utilized to understand the clients, their context and expectations. This has been referred to as Persona Writing and/or Scenario Building. This presentation will help participants explore how the use of narrative can be expanded beyond the traditional uses into areas of pre and post design communication. The aims are twofold: 1) To help engage the client see the work through the narrative, and 2) To be used as creative method for teaching the history of buildings in its various life cycles. Having taught History of Architecture and Design for many years at the college level has always challenged me. The first challenge has been staying current on the information and second, how to engage the student with the topic. History for many can be boiled down to unpronounceable names, innumerable dates and recondite locations. Surprisingly Fox Animation Studios, in a few instances has helped bridge that gap. In a recent lecture, while trying to contextualize the Bolshevik Revolution with the forces of neoclassicism, I called on a rather lethargic student to share her thoughts. To my surprise she was able to explain the context based on her own childhood recollections from Fox Animation's "Anastasia." Others immediately reacted with similar insights, turning a sleepy classroom into a vivid exchange. I thought to myself, "I wish there was a cartoon or childhood animation for every historical period!" It was this event that reinforced my conviction regarding the power of narrative in education, especially in bringing history and design to life. Although narrative has been a teaching tool in many disciplines and in most cultures and times, it seems to be less valued in current teaching environments. In an effort to be accurate and precise many disregarded narratives as inaccurate representations of history and not as a good example of scholarship. While narrative does not always fit neatly in the historical record, it serves to engage the audience in ways which dates, geographical locations and dry facts sometimes cannot. Narrative has been introduced in history classes as well as the studio. Traditionally Persona Writing and Scenario Building have been used as mechanisms to

introduce students to projects in the Pre-Design phase. This information has served to guide the design process. In this workshop, my aim is to provide an overview of the benefits of using narrative with students as well as with clients, and describe the ways in which I have implemented a Post Design writing exercise aimed at evaluating the design solution against a futuristic narrative: “5 years from now.”

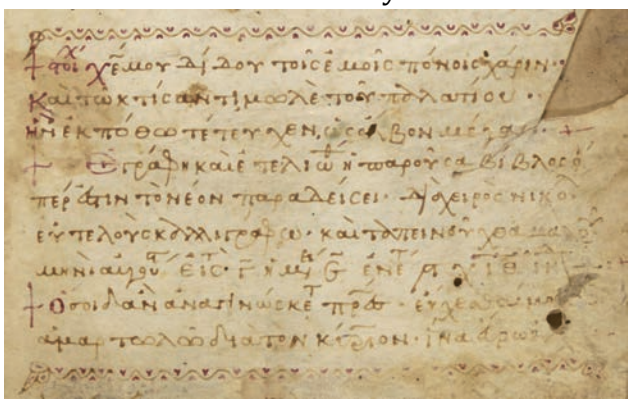
References

1. De Bleeckere, S. (2017) *Narrative Architecture: A Designer’s Story*. New York, NY: Rutledge.
2. Hokanson, B. (2018) *Educational Technology and Narrative: Story and Instructional Design*. Cham, Switzerland: Springer.
3. Puckett, K. (2016) *Narrative Theory: a Critical Introduction*. Cambridge, England: Cambridge University Press.

Michelangelo's Vestibule

Florence, July 10, 1618. I am Jacopo of Cortona. I am 20 years old. Fray Domenico, too old to take the road, has entrusted me to travel to Florence to copy from an old manuscript, guarded by the monks of San Lorenzo. He read the old manuscript when he was a student at the monastery thirty years ago, but his memory fails him …

He taught me the Greek alphabet and most of the text of the book of San Marco I can read in Greek, and I can even translate it to Latin! But Fray Domenico is sad and doubtful! Sad about coming to the



end of his life, the doctors do not think that he can live past the winter. His concern is not the end of his life as much as the ending of the book. He remembers the ending differently. He needs reassurances; he needs clarity before his own end.

My trip has been too long. I had packed enough food for six days. But Arezzo was too much for me. Why did I stop to rest at that tavern? I should have been wiser. Fray Domenico had

warned me of the dangers o f a big city like Arezzo. Two weeks later and I am finally in Florence. Only two coins left. Hungry and bruised on my flesh, and even deeper in my heart!

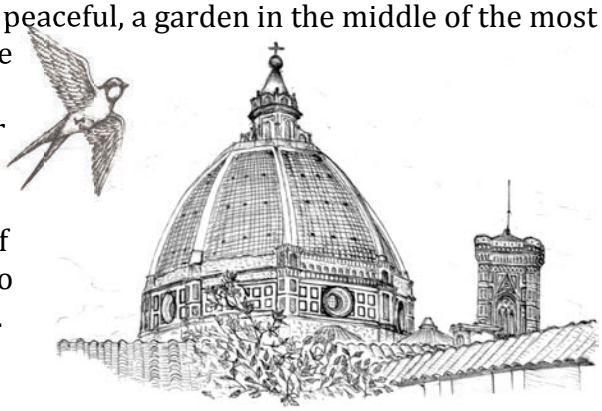
The charity of the monks and the good memory of the rector, have afforded me respite after such painful journey. When I finally heard the heavy doors to the cloister close behind me all the filth of the streets and dust of the roads disappeared in in light and fragrance. The quiet passageways where bathed in sunlight and for once I didn't have to look over my shoulder. I was safe in the arms of God!

After my confession, I walked around the courtyard of the cloister seven times praying for forgiveness. Why do I still feel so much guilt?

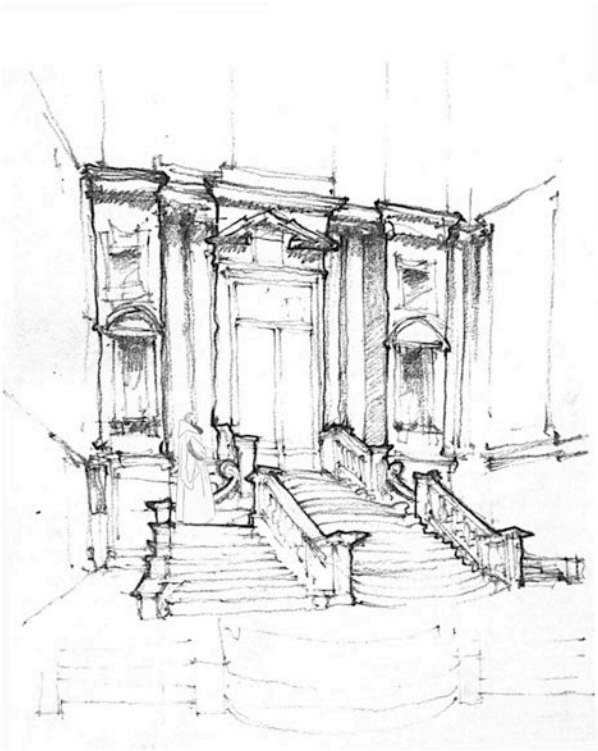
Francesco calls me after my prayers. I can finally follow him and his brothers to the book room. Finally I will be able to touch the leather text that has intrigued Fray Domenico for so many years. I will have my answer and his!

The monks climb in silence. I want to take two steps at a time but their pace is slow almost reverential. They are ascending cautiously … I want to leap!

On the fist *piano* once again I am confronted by Brunelleschi's dome. So large and imposing everywhere you look, shining over the rooftops. The cloister is peaceful, a garden in the middle of the most powerful city. I want to stay here; outside these walls there is only pain for me. I long for Cortona, like a *rondine* I can soar away from so much danger.



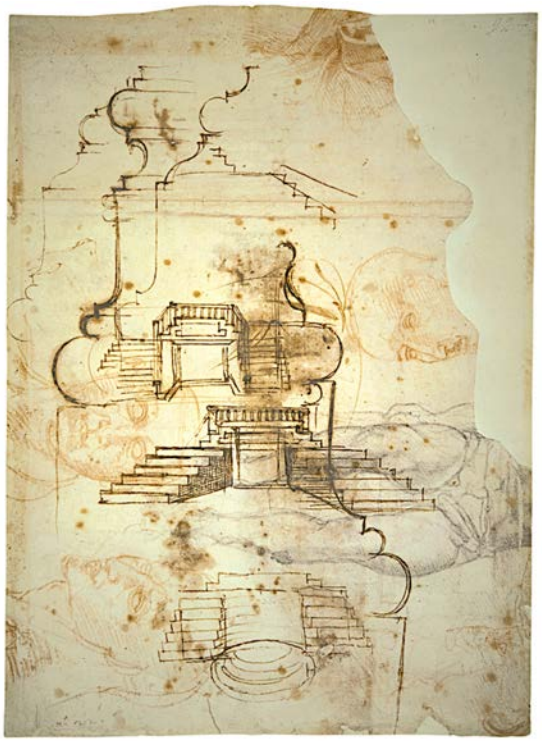
The doors open. Small doors for such important library. Now the cool air full of musk hits me as I enter. My eyes adjust to the interior after the glare of the cloister. My sight is immediately drawn upward, where the light gently trickles along the columns that protrude from the walls and then I see the staircase. This is not the library! There are no tables or reading benches, nor any rolls of parchment. Although the steps look like scrolls that gently unwind to invite us upward.



The monks pause, and one by one begin their final ascent. Almost as in penance or veneration as they approach the portico of knowledge.

I am surprised by the size and form of the steps. Being from Cortona I am not afraid of a climb, but I hesitate. The monks before me all seem to have a preferred path. It is a choice that seems premeditated. The older ones go to the center of the room, avoiding the straight line to the entrance. It is almost like they want to linger in the space and a approach the door like

they would an important person. They look up as they take the first step. The seem to align themselves with the entrance and instead of looking down at the steps, they look up in confidence. Some take the side steps, but their approach is different. They have to measure their steps and eventually, when they get to the landing they stop to let the others pass. Everyone at some point stops on the stairs, they are not here just to be treaded on. They are there to be considered! The stairs like the space itself requires a pause. It is like the elders in Cortona, you can not just pass by them … you have to stop before them, bow slightly and respectfully greet: “salve.”
They gradually all file into the library, I am still by the door. Francesco nudges me forward, but I am paralyzed. It finally comes to me what Fray Domenico had described. Ha had been here as a novice and he had told and retold his first day at the library. He had come to San Lorenzo as a youth, but it had taken him several years to actually be allowed into the library. His life and studies had been carried out on the ground floor around the cloister. His daily routine revolved around the enclosure and safety of the walls. Prayers five times a day in the chapel, service chores in the kitchen and the latrines, it was his way of paying the for the opportunity to be rescued away from the streets of Siena. Eventually there were classes, mostly Latin and the constant copying of words and sentences. He had many companions, abandoned orphans like himself, which numbers quickly decreased as one by one sought a way to scape. For Fray Domenico, scape was not an option. He had spent to many years begging to survive. His life in the monastery was heaven compared to his childhood. The monks at San Lorenzo had given him a new life.



Just Getting in: Equity in Historic Retail Settings

Jennifer Webb
University of Arkansas
Fayetteville, AR

Retailing contributes $2.6 trillion to the annual U.S. GDP and sustains more than 42 million people (Bureau of Economic Analysis, 2019). Equitable retail design becomes imperative as 26% of the adult population has some type of disability (Centers for Disease Control and Prevention, 2019). An earlier project revealed that persons with disabilities encountered permanent and temporary barriers in retail environments. Activities such as procuring desired grocery items, moving displays from store exits, clearing damaged merchandise after bumping a display required assistance from family members, store personnel, and strangers. Persons with disabilities stated they avoid brick-and-mortar and their online counterparts that are not equitable. Retailers alienate important customers by failing to understand the financial implications of environmental barriers. The goal of this project was to create a taxonomy of barriers for individuals with a reduced functioning (mobility, sight, hearing) in an historic town square retail setting. Four research assistants educated in rehabilitation counseling or interior design recorded both quantitative and qualitative aspects of the environment. Each retail environment was photodocumented and light and sound readings were taken at key locations in each space. The research assistants collaborated across disciplinary specializations on observations and written analyses of the shopping environments. Following this data collection, the primary investigators conducted content analysis of the data as well as their own first-hand observations. The research site was a town square was first established in the 1890s and has subsequently undergone multiple alterations and changes of businesses. Today, the square is populated by local businesses and retailers that include banks, law offices, restaurants, gift shops, clothing stores, and specialty shops, some established decades earlier and others much more recently. For this project, eleven businesses focused on retail shopping were assessed. This study revealed clear categories of common barriers as well as important differences between types of retailers, business owner attitudes, and length of time in business. Taxonomic categories included store approach, store entry, circulation, display, lighting and glare, and cash wraps. Stores featuring home décor and gifts were burdened by perceived risk small on the part of the shopper, circulation clearances, informal merchandise arrangements, variable illumination levels, and generalized clutter. Clothing store barriers included inaccessible displays and fitting rooms. All store types confronted barriers with store approach and entry as well as level changes and flooring materials. Businesses

established decades earlier had “work-arounds” for shoppers while more recent businesses indicated that the target demographic did not include “elderly shoppers.” The taxonomy of barriers will be discussed in context to the design and renovation of retail spaces to provide equitable environments in historic settings.

References

1. Bureau of Economic Analysis. (2019). GDP by Industry. Retrieved from https://www.bea.gov/data/gdp/gdp-industry.
2. Centers for Disease Control and Prevention (2019). Disability Impacts All of Us. Retrieved from https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html.

Student's Preference of Design Mediums in the Design Process

Luis Mejia
Oklahoma State University
Stillwater, OK

Design mediums comprised of traditional and digital tools are used along the design process depending on the stage's characteristics as well as the designer's needs (Ibrahim & Rahimian, 2010). Traditional tools such as pencil and paper have been found critical for the conceptual stage of the design process. Attributes of ambiguity and density present in these traditional tools support idea generation processes and stimulate iteration between thoughts and idea's representations (Goldschmidt, 1991). In contrast, digital tools like digital 3D models or virtual environments are more commonly used in the detail design stage. Attributes of efficiency, repetitiveness, and realistic results present in digital tools currently motivate designers to use them more frequently along the complete design process. Nonetheless, digital tools have been seen as restrictive for ideation purposes in the design process (Purcell & Gero, 1998). The main purpose of this study was to better understand student's preferences between traditional and digital tools in the different stages of the design process. To accomplish this objective, a purposive sample of design students from junior and senior level in two universities in Latin America and North America was selected to respond to a questionnaire. The sample was comprised of students majoring in interior design, industrial design and product development. The questionnaire explored the different design steps these students undergo within the design process and the type of tools they most commonly used in those design steps. Statistical analysis was used to compare means between design mediums' preferences. The outcomes of this study will help deepen the knowledge of design tools' selection along the design process; more specifically in current design students. Additionally, it will help educators to enhance design studios and design practices to better cater to students' needs.

Reference

1. Gericke, K., & Blessing, L. (2011). Comparisons of design methodologies and process models across domains: a literature review. In DS 68-1: *Proceedings of the 18th International Conference on Engineering Design (ICED 11), Impacting Society through Engineering Design, Vol. 1: Design Processes, Lyngby/Copenhagen, Denmark, 15.-19.08. 2011.*
2. Goldschmidt, G. (1991). The dialectics of sketching. *Creativity research journal*, 4(2), 123-143.

3. Ibrahim, R., & Rahimian, F. P. (2010). Comparison of CAD and manual sketching tools for teaching architectural design. *Automation in Construction*, 19(8), 978-987.
4. Purcell, A. T., & Gero, J. S. (1998). Drawings and the design process: A review of protocol studies in design and other disciplines and related research in cognitive psychology. *Design studies*, 19(4), 389-430.

Studio Z: Hybrid design studios that combine Virtual Reality and Rapid Prototyping

Tilanka Chandrasekera
Oklahoma State University
Stillwater, TX

Design problem solving has been discussed through methods such as insight problem solving, trial and error problem solving, and formal and logical processes(Cristofori, Salvi, Beeman & Grafman, 2018). The effect of prototyping (which is essentially a trial and error method of problem solving) is discussed in several studies with regard to design problem solving. In most of these studies where prototyping in the design process is discussed, one re-occurring theme is its effect on fixation. Design fixation is identified as the inability of the designer to move away from an idea in order to resolve a problem(Purcell & Gero,1996). Digital prototyping coupled with Rapid prototyping maybe an approach to alleviate any fixation effects caused through physical prototyping, due to their ambiguous nature and time needed to generate them. In this academic exercise researchers introduce the use of Virtual Reality and Rapid Prototyping in an early design studio. Students were instructed to work on a simple dorm room design using Virtual Reality, and then design a light fixture that would be later prototyped using 3D printing. In this study two types of HMD's were used: The HTC Vive and the Oculus Rift CV1. While the HTC Vive is used as a HMD that supports room scale VR, the Oculus Rift is used for stationary/standing VR. A between-groups experiment was conducted to explore the difference between the uses of two HMD's. Twenty-two subjects (n=22) from an early interior design studio were recruited for the study and were randomly assigned to the two groups: Seated VR (n=12)and Room Scale VR (n=10). The dependent variables are presence, simulator sickness and behavioral intention to use the technology in the future. The outcomes of this research are (1) development of a new presence questionnaire that focuses on newer VR systems, (2) Understanding student perception of using VR in design projects. While identifying digital prototyping and rapid prototyping as a valid method in problem solving, in this educational exercise researchers used 3D printing in an early interior design studio, where the students were required to design a lighting fixture and print a working prototype. 22 students were grouped in to 6 groups and the groups design 6 types of lighting enclosures. The students then answered a questionnaire based on the Technology Acceptance Model. The two main variables measured through the questionnaire were Perceived Ease of Use (PEU) and Perceived Usefulness (PU) which leads to the third variable measured that of Intention to Use (IU). The results of the study provide implications of using different mediums in expressing design intentions that appeals more to a newer generation of design students.

References

1. Purcell, A. T., & Gero, J. S. (1996). Design and other types of fixation. *Design studies*, 17(4), 363-383.
2. Cristofori, I., Salvi, C., Beeman, M., & Grafman, J. (2018). The effects of expected reward on creative problem solving. *Cognitive, Affective, & Behavioral Neuroscience*, 18(5), 925-931.

The Building Database & Analytics System (BuDAS): Computer Science and Interior Design Take on 'Big Data'

Elise King
Baylor University
Waco, TX

Mass digitization has allowed greater access to archival materials than ever before. From 19th and 20th century house plans to the Houses of Parliament, there are a myriad of digitized architectural drawings available online. While access has certainly improved, processing and analyzing the rich information contained in these drawings remains challenging. In the age of 'big data,' having access to information is no longer enough; we need tools to sift through massive amounts of raw information to identify meaning and pattern (Manovich, 2012). Frustrated by the lack of tools to analyze archival floor plans (i.e., scans of original drawings), the authors considered the following question: How can we automate the collection of floor plan information and explore patterns and relationships between plans, architects/designers, and time periods? In this paper we explore the challenges of analyzing archival floor plans and provide an overview of the Building Database & Analytics System (BuDAS), which we developed to address these problems. The challenges of studying large corpora of floor plans is not limited to interior design. In 2015 a group of historians in Netherlands planned to analyze floor plans for 7,700 farmhouses that were destroyed during WWII and then rebuilt between after the war (Alkhoven, Stenvert, & Elpers, 2016). Researchers employed image processing software, optical character recognition (OCR), and vectorization. Each step was time-consuming: from individually converting scanned images to vectors, to applying OCR, to retrieving data. As a result, researchers were only able to analyze 10 floor plans, far short of their original goal of nearly 8,000. Their experience is not uncommon. Without tools to compare large quantities of floor plans, many researchers use case studies, often with a sample size of between ten and fifteen buildings (Dawson, 2002; Ostwald, 2011; Nevadomsky, Lawson, & Hazlett, 2014). This method, while capable of providing useful findings, does not allow, for example, for longitudinal analysis, and the sample size limits researchers' ability to identify patterns in data. To solve the problem of manually collecting plan information, we developed BuDAS, uniting complementary manual data entry and image recognition techniques to partially automate the process of floor plan detection and analysis. BuDAS 1.0 includes three main components: 1) floor plan image extractor and annotator, 2) plan database, and 3) plan analyzer. The extractor uses scanned images (jpeg or pdf) of the original floor plan and detects rooms, room names, and doors. The annotator is a tool that allows users

to provide additional information or correct information retrieved by the extractor. The database then stores extracted information, and the analyzer provides tools to query and analyze floor plan information (see appendix). Studying archival plan information encourages new research questions and provides a means for data-driven historical analysis that transcends discussions of style and formalism.

References

1. Alkhoven, P., Stenvert, R., & Elpers, S. (2016). Comparing architectural floor plans: New strategies new digital tools for architectural historians. Paper presented at *Digital Humanities*.
2. Dawson, P. (2002). Space syntax analysis of Central Inuit snow houses. *Journal of Anthropological Archaeology*, 21(4), 464-480.
3. Ostwald, M. J. (2011). A justified plan graph analysis of the early houses (1975-1982) of Glenn Murcutt. *Nexus Network Journal*, 13(3), 737-762.
4. Nevadomsky, J., Lawson, N., & Hazlett, K. (2014). An ethnographic and space syntax analysis of Benin kingdom nobility architecture. *African Archaeological Review*, 31(1), 59-85.
5. Manovich, L. (2012). How to compare one million images. In D. Berry (Ed.), *Understanding digital humanities* (pp. 249-278). London: Palgrave Macmillan.

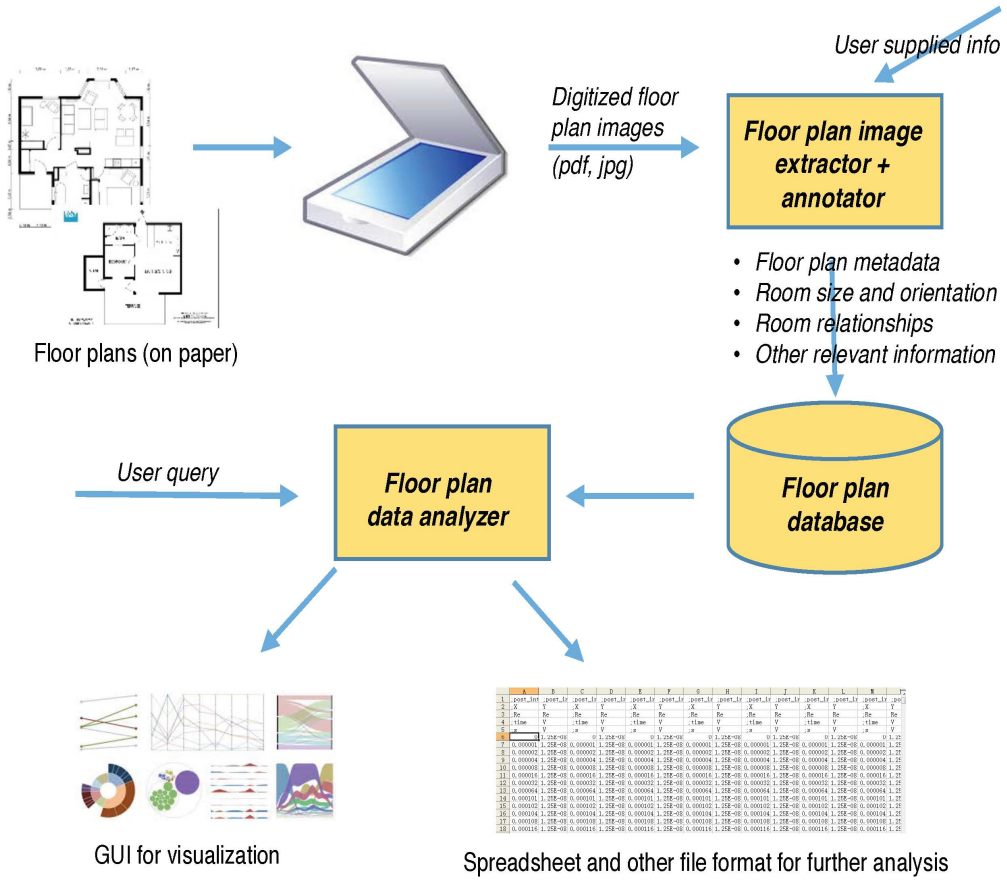


Figure 1. *Overall architecture and workflow of BuDAS*

Figure 1 shows the architecture and workflow of BuDAS. The first part of BuDAS is to automatically extract data from floor plans (extractor) and annotate them (annotator). Users supply a scanned image (pdf or jpeg) of the floor plan and pass it to the extractor. The extractor then detects information (e.g., rooms, room names, doors) on the floor plan for the user to review. At that stage the user can accept all the information, or they can use the annotator to add information not captured.

Once the user confirms the information extracted and annotated as correct, the system populates populate the data into the database. At this stage the data are ready to be queried and analyzed by the analyzer. The analyzer provides a standard set of basic and advanced queries, together with an GUI that allow user to simply type in the information they are looking for without having to learn a query language.

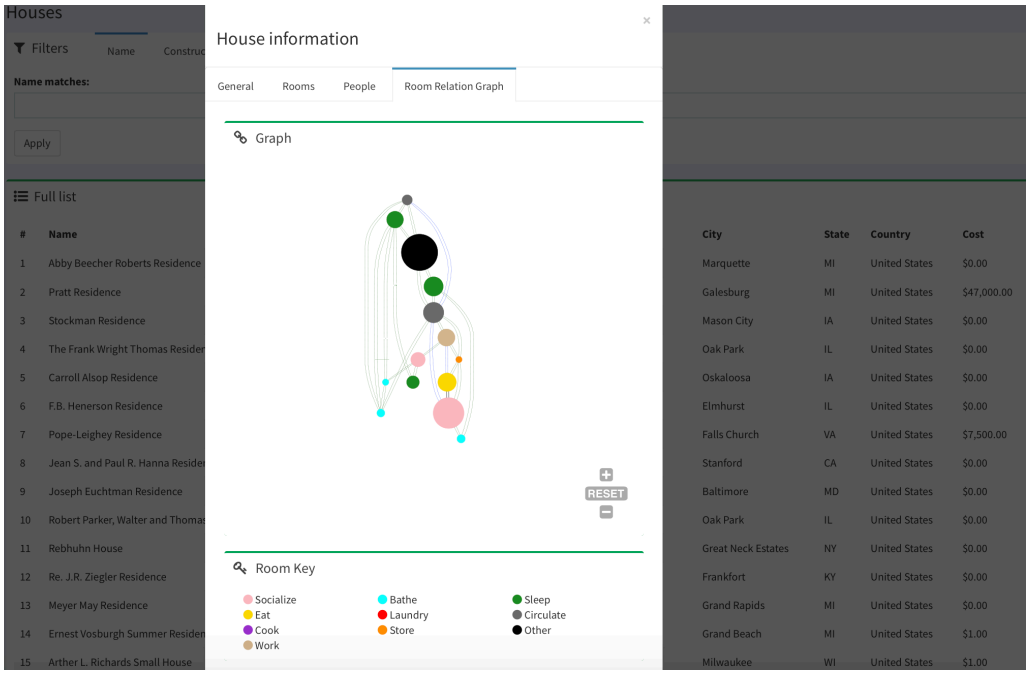


Figure 2. *Room relationship tool*

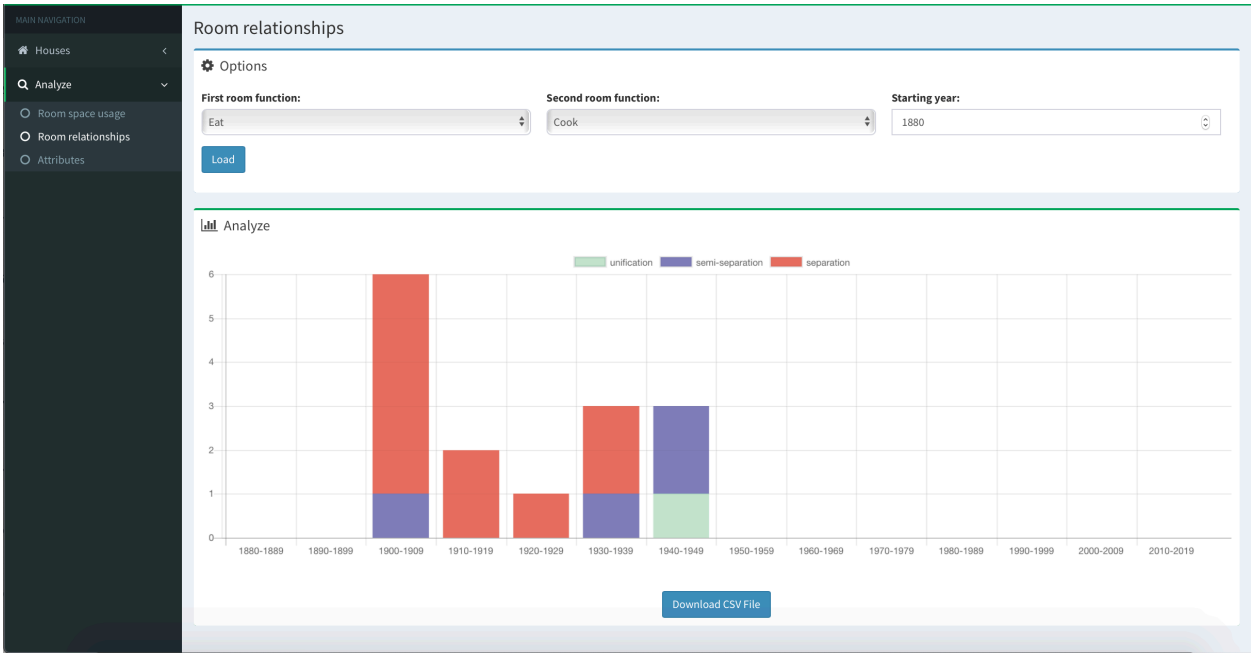
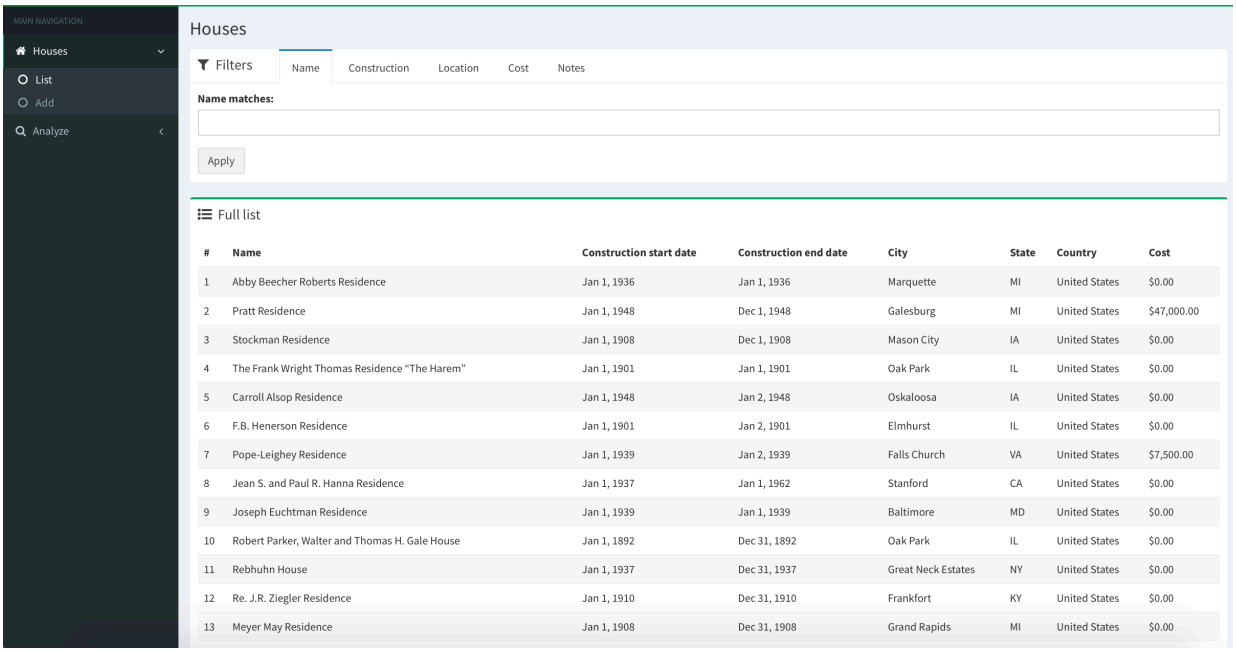


Figure 3. *Analyzer tool showing room relationship graph*

Figure 2 provides an example of the room relationship tool, which allows users to view the size of rooms (size of circle), relationship between rooms (connector line type), and type of room (color of circle).

Figure 3 shows one of the built-in analysis functions in the *analyzer* tool. Users can compare the relationship (unified, semi-separated, or separated) between rooms over a specified period of time. Two other analysis tools (room space usage and attributes) are also included in the *analyzer.*



#	Name	Construction start date	Construction end date	City	State	Country	Cost
1	Abby Beecher Roberts Residence	Jan 1, 1936	Jan 1, 1936	Marquette	MI	United States	$0.00
2	Pratt Residence	Jan 1, 1948	Dec 1, 1948	Galesburg	MI	United States	$47,000.00
3	Stockman Residence	Jan 1, 1908	Dec 1, 1908	Mason City	IA	United States	$0.00
4	The Frank Wright Thomas Residence “The Harem”	Jan 1, 1901	Jan 1, 1901	Oak Park	IL	United States	$0.00
5	Carroll Alsop Residence	Jan 1, 1948	Jan 2, 1948	Oskaloosa	IA	United States	$0.00
6	F.B. Henerson Residence	Jan 1, 1901	Jan 2, 1901	Elmhurst	IL	United States	$0.00
7	Pope-Leighey Residence	Jan 1, 1939	Jan 2, 1939	Falls Church	VA	United States	$7,500.00
8	Jean S. and Paul R. Hanna Residence	Jan 1, 1937	Jan 1, 1962	Stanford	CA	United States	$0.00
9	Joseph Euchtman Residence	Jan 1, 1939	Jan 1, 1939	Baltimore	MD	United States	$0.00
10	Robert Parker, Walter and Thomas H. Gale House	Jan 1, 1892	Dec 31, 1892	Oak Park	IL	United States	$0.00
11	Rebhuhn House	Jan 1, 1937	Dec 31, 1937	Great Neck Estates	NY	United States	$0.00
12	Re. J.R. Ziegler Residence	Jan 1, 1910	Dec 31, 1910	Frankfort	KY	United States	$0.00
13	Meyer May Residence	Jan 1, 1908	Dec 31, 1908	Grand Rapids	MI	United States	$0.00

Figure 4. *Houses (list)*

Figure 4 shows the list of houses that have been entered into the database and includes an option for filtering and searching by name, construction dates, location, cost, and notes. Users can click on an entry to bring up additional information and find the room relationship graphs as well.

Sample Floor Plan

Result of automatic room detection (rooms highlighted in red)

Result updated with top left room split by user

Figure 5. *Screen captures showing plan recognition (extractor) and room split tool (annotator)*

Figure 5 provides an example of the automatic plan detection functionality, which automates the process of entering plan information into the database.

A Social and Cultural Collaboration of Human Centered Design Across Campus

Suchismita Bhattacharjee and Tracy Howard
University of Oklahoma
Norman, OK

Several Design based higher education institutions across the world have started incorporating human-centered design focused education in their curriculum; yet there is no consensus on what constitutes the body of knowledge on human-centered design and how to deliver it. Human-centered design is the vast umbrella that encompasses several individual design aspects such as universal design, ergonomics, accessible design, human factors, environmental quality, etc. Several studies conducted across the world in the past identified the importance of human-centered design education across various disciplines which includes both architectural and engineering design (Buchanan 2004; Mcguire, Scott & Shaw 2006; Sanders 2008). Council of Interior Design Accreditation (CIDA) guidelines reference the terms “human centered”, “human wellbeing”, “human experience”, “human perception” and “human factors” in the goals of the five out of 13 standards focusing on ID course content (Council for Interior Design Accreditation, 2017). This presentation will explain the process of implementation of human centered design project to educate the young minds about its importance. It is often expected that Interior Designers begin acquiring human-centered design principles and data during their higher education. This presentation will discuss the effectiveness of a specially designed collaborative course for the sophomore level Interior Design (ID) students. The students worked in teams to design a space for the Department of African & African-American Studies (AFAM). The AFAM Department wanted to relocate to a space that reflects its rich cultural history and encourages community engagement. This new space was required to tell the story of the AFAM Department, and other significant aspects of their culture and history, rooted in Oklahoma. This specially designed human-centered design project, dealt with engaging in a collaboration study, including the interior design students, and the students and faculty of the AFAM Department, the participants that would be benefiting from the new space. ID students spent weeks researching on the rich cultural history of the African-American community both in and outside of Oklahoma to facilitate their preliminary design development. Further they were required to interview the Chair, faculty members, and students of the AFAM Department. The collaboration gave the students the ability to gain the knowledge of human behavior from the users and from their physical, psychological, and cultural needs. The students had to address the human factors that

relate to the space and how the participants would use the spaces, how was natural lighting going to affect them and was there a need for an additional lighting source. How the layouts of the new space was going to incorporate Universal design and provide the desired cultural feel of the users. This design project was a transformative experience for the sophomore level students with positive impacts. This presentation will present the experiences, the beneficial stimulus and positive effects on the students from working on this collaborative social and cultural impactful design project.

References

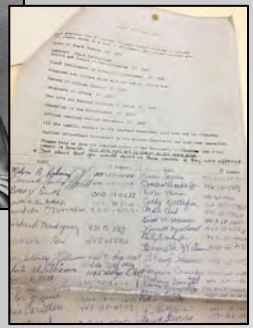
1. Buchanan, R. (2004). Human-centered design: Changing perspectives on design education in the East and West. *Design Issues*, 20(1), 30-39.
2. Mcguire, J. M., Scott, S. S., & Shaw, S. F. (2006). Universal design and its applications in educational environments. *Remedial and special education*, 27(3), 166-175.
3. Sanders, E. B. N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *Co-design*, 4(1), 5-18.

PROJECT 1 – DESIGN FOR THE DEPARTMENT OF AFRICAN & AFRICAN AMERICAN STUDIES

Concept and Inspiration

Historical Influence

Clara Luper -
Department eponym



OU Students signatures demanding AFAM Curriculum

African American art and imagery

Precedent Study

California African American Museum -(Central Reception)

Wagner Hall - (Classroom/Lounge Seating)

Inspirational Spaces

Concept Words

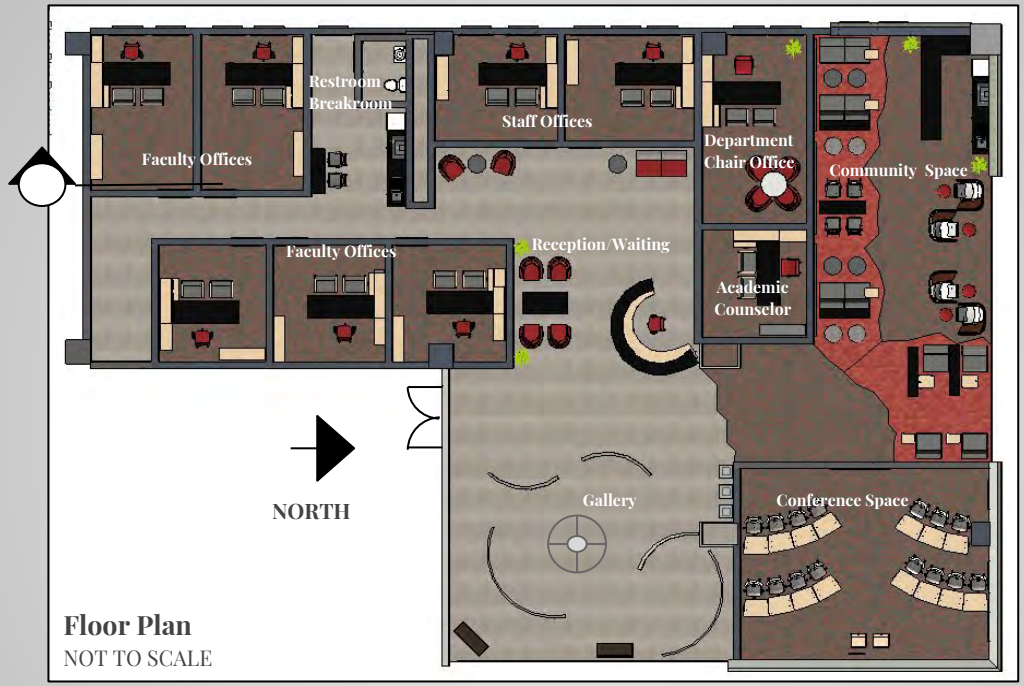
- Symbolic
- Energy
- Bold
- Timeless
- Progress
- Engagement
- Rhythm
- Purpose

Design Parti

Hank Willis Thomas - *Raise Up* (2014)

This sculpture embodies the symbolic, historic, timeless, purposeful, and bold attributes that the design of the space is going to reflect.

Floor Plan/Section



Floor Plan
NOT TO SCALE

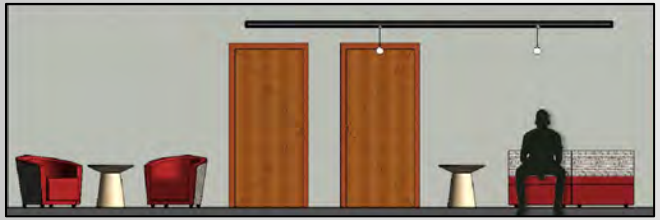
Longitudinal Section of the East Wall
NOT TO SCALE

Reception/Waiting Room

View of Reception/Waiting Room - Westward Side

NOT TO SCALE

Location Key



Waiting Room Elevation - West Wall

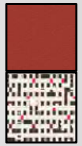
NOT TO SCALE

FURNITURE

COFFEE TABLE

GUEST CHAIR

TASK CHAIR



SOFA

SIDE TABLE

CEILING

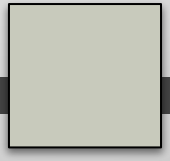
ACOUSTIC PANEL

LIGHTING

BEAM LIGHT

CHANDELIER

WALL FINISH



PAINT

FLOOR FINISH

PORCELAIN TILE

Cultural Center/Gallery

Inspiration

View of Gallery Space - North Walls

NOT TO SCALE

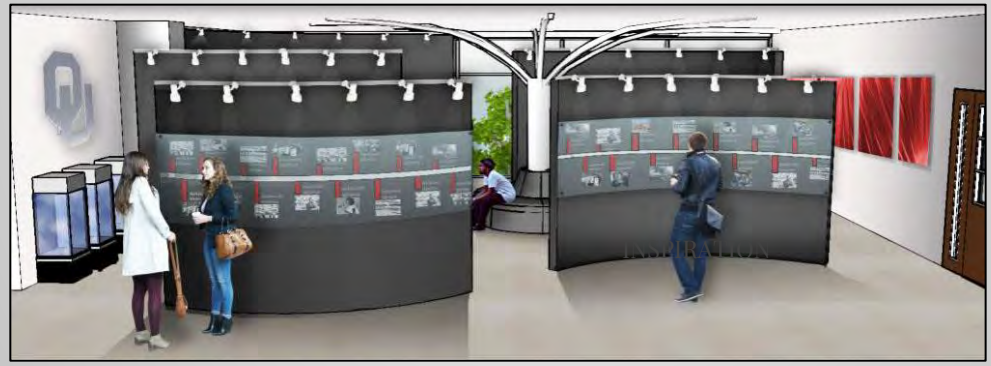
FURNITURE

LOUNGE CHAIR

BENCH

LIGHTING

TRACK LIGHTING



View of Gallery Space - East Wall

NOT TO SCALE

Location Key

WALL FINISH

PAINT

FLOOR FINISH

PAINT

PORCELAIN TILE

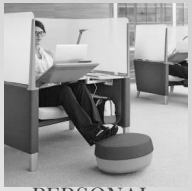
Collaborative Community/Student Space

View of Collaborative Community Space - Northwest Corner
NOT TO SCALE

Collaborative Community Space - Northeast Corner
NOT TO SCALE

Collaborative Community Space Elevation South WalL
NOT TO SCALE

FURNITURE



PERSONAL DESK

BAR CHAIR

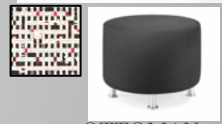
WORK TABLE

SIDE TABLE

WORK TABLE

LOUNGE CHAIR

SIDE TABLE



OTTOMAN

CEILING

ACOUSTIC PANEL

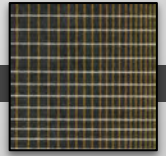
LIGHTING

BEAM LIGHT

CHANDELIER

WALL FINISH

PAINT



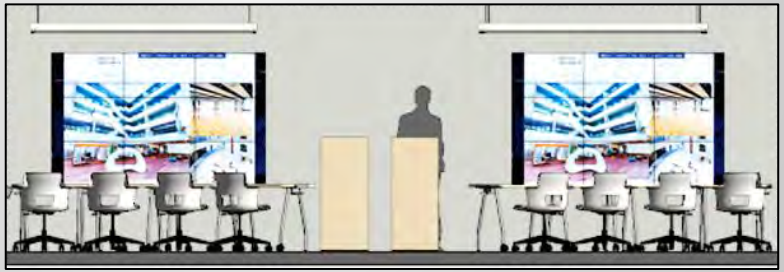
WALL PANEL

FLOOR FINISH

CARPET

Conference Room/Classroom

View of Conference Room - Northeast Corner
NOT TO SCALE



Conference Room Elevation-East Wall
NOT TO SCALE

FURNITURE

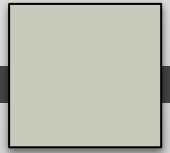
DESK

TASK CHAIR

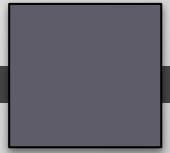
LIGHTING

BEAM LIGHT

WALL FINISH



PAINT



PAINT

FLOOR FINISH

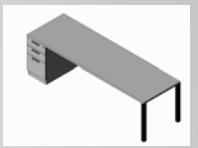
CARPET

Department Chair & Academic Counselor Offices

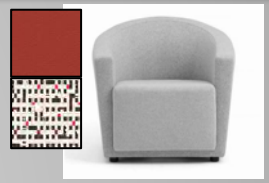
View of Department Chair Office- Northwest Corner
NOT TO SCALE

Academic Counselor Office - West Wall
NOT TO SCALE

FURNITURE



DESK SYSTEM



GUEST CHAIR

TASK CHAIR

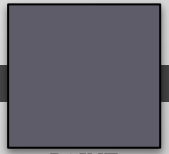
TABLE

DESK SYSTEM

LIGHTING

BEAM LIGHT

WALL FINISH



PAINT

FLOOR FINISH

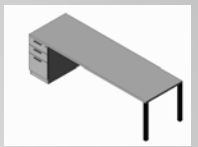
CARPET

Faculty and Staff Offices

View of Faculty Office- Northwest Corner
NOT TO SCALE

Staff Office Elevation - West Wall
NOT TO SCALE

FURNITURE



TASK CHAIR

DESK SYSTEM

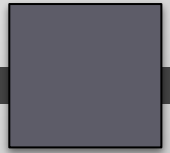
GUEST CHAIR

DESK SYSTEM

LIGHTING

BEAM LIGHT

WALL FINISH



PAINT

FLOOR FINISH

CARPET

Breakroom and Staff Restroom

View of Break Room - East Wall
NOT TO SCALE

Staff Restroom- North Wall
NOT TO SCALE

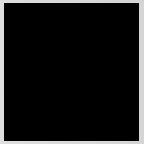
Break Room Elevation - North Wall
NOT TO SCALE

FURNITURE

BAR CHAIR

WORK TABLE

COUNTER TOP



LAMINATE

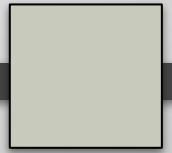
CABINET FINISH

LAMINATE

LIGHTING

BEAM LIGHT

WALL FINISH



PAINT

FLOOR FINISH

PORCELAIN TILE

An exploration of wellness in the built environment: Redefining the college campus center to address a generation defined by direct communication and unique experiences

Lynette Panarell and Sylvia Masters
Wentworth Institute of Technology
Boston, MA

The abstract provides outcomes for an exploration of anxiety, depression, and overall wellness of Generation Z currently on college campuses and future matriculating generations. The exploration included identifying characteristics of how a small cohort of Generation Z interior design students define wellness and how these characteristics can be effectively communicated and integrated into the built environment to support the health and wellness of this generation. Can their solutions also help to break down the taboo of mental health? To begin, students were provided global statistics from major organizations reporting on this crisis. According to recent statistics by NAMI, National Alliance of Mental Illness, 1 in 5 adults in the U.S. experience mental illness in a year. Approximately 1 in 5 youth aged 13–18 experiences a severe mental disorder at some point during their life, 18.1% of adults in the U.S. experienced an anxiety disorder such as generalized anxiety disorder, posttraumatic stress disorder, obsessive-compulsive disorder and specific phobias. (NAMI: National Alliance of Mental Illness) Ghandour and others document that 3 in 4 children aged 3-17 years with depression also have anxiety and almost 1 in 2 have behavior problems (qtd. in CDC). Through these statistics, the following questions were formulated to guide the design students. How do we address social isolation and the rise in mental health issues by both using technology and freeing future generations from the need of it within the built environment? How are college campuses providing support in the built environment for students to learn to cope, be more resilient and acclimate into the workplace? The student cohort and guiding professors investigated campus life and mental health on their local campus. The method of information gathering were surveys (internal and external) and research topics that included; defining Gen Z and Generation Alpha, the history of mental health stigmas, and trends in workplace based on wellness such as the WELL building standard(WELL| International Well Building Institute). Precedent study presentations also informed the students on current initiatives on college campuses across the United States provided guiding principles for the cohort. Their program was partially designed by the instructors and part self-generated as the end user/client. The classic critique process in the studio culture itself was also addressed to support the culture of Generation Z. Critiques inevitably create a certain amount of anxiety. Multiple methods of critique were developed over the course of the semester in addition to classic critiquing methods.

Students responded positively to a project focused on wellness and mental health. Their final design solutions addressed many elements of wellness(physical, mental, social) that also worked to combat the stigma still associated with mental health issues. The outcomes presented focused on creating unique experiences for individuals. These unique experiences created a voice for students to address their present culture of direct communication and individualized experiences that they feel have not been thoroughly explored on college campuses for current and future generations.

References

1. CDC. *Data and Statistics on Children's Mental Health*. Centers for Disease Control and Prevention, 20 Dec. 2018, www.cdc.gov/childrensmentalhealth/data.html. Accessed Apr. 2019
2. NAMI. *Mental Health By the Numbers | NAMI: National Alliance on Mental Illness.* Nami.Org, 2015, www.nami.org/Learn-More/Mental-Health-By-the-Numbers. Accessed 2019.
3. US Census Bureau. *Nearly 1 in 5 People Have a Disability in the U.S., Census Bureau Reports - Miscellaneous- Newsroom - U.S. Census Bureau*. Census.Gov, 2018, www.census.gov/newsroom/releases/archives
4. IWBI. *WELL | International WELL Building Institute.* Wellcertified.Com, 2019, https://www.wellcertified.com. Accessed 23 May 2019.

Appendix:

An exploration of wellness in the built environment: Redefining the college campus center to address a generation de ined by direct communication and unique experiences.

Project Brief:

Mental health historically has been a taboo topic. Today, more and more companies are recognizing the importance of mental health not only for the health of their employees but also to their financial bottom line. Healthy employees means more productivity and less sick time. Companies are now beginning to offer mental health days as well as sick days. In the design industry, the WELL Building standard is now being used to help create healthier environments for the end user.

Our society is comprised of an ever-increasing number of children and adults with differences. These differences range from race, ethnicity, gender, socio-economics, and religion to neurological issues, physical disabilities and mental health challenges. Generation Z, who is actively matriculating into higher education, is exhibiting an unprecedented level of stress, mental illness, and suicide. (American Psychological Association)

We are a fast moving society. We spend more time on screen than speaking to others. We judge our lives by other people's experiences on social media. We multi task to the point of being unproductive instead of productive.

Over the course of the semester we will explore what wellness is, what is wellness to you? How can higher education address wellness and integrate it into the fabric of the campus culture. How can we contribute to normalizing wellness from being taboo. Wellness is an integral part of everyday higher educational life, professional and personal lives.

Over the next 15 weeks you will be challenged with designing a new student union. The location of the new building on campus lends itself to be a building that everyone wants to walk through on their way across campus especially with our weather. We will investigate how this building can be used as a student union and how we can integrate our Student Affairs divisions into the building by addressing a more holistic daily approach to wellness from everyday emotional, physical, and mental needs.

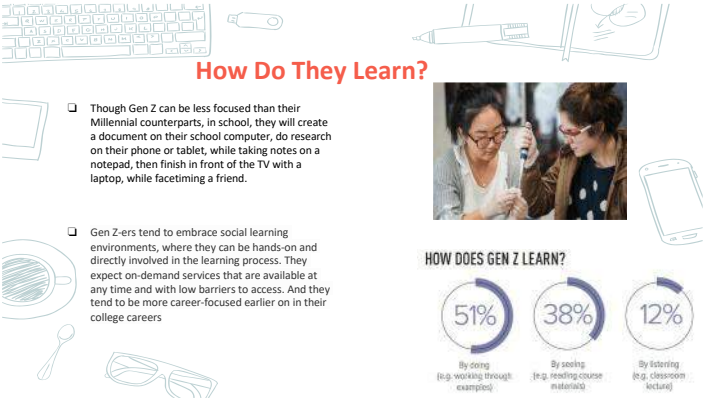
How can you help as a designer to begin to create spaces that break down the barriers of this taboo topic?

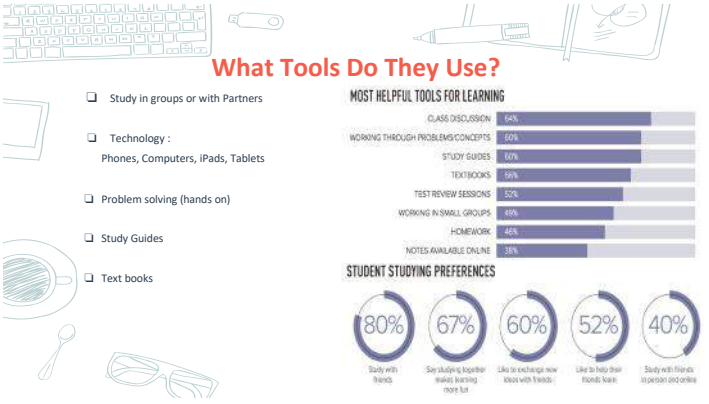
Research Topics:
To begin to understand the many variables in our project, you will begin by researching an assigned team topic and then conducting a precedent analysis.

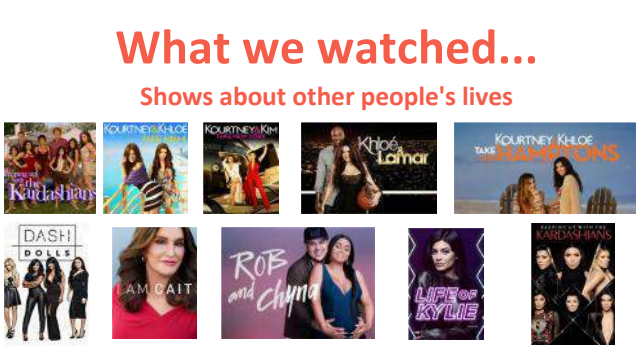
Appendix:

An exploration of wellness in the built environment: Redefining the college campus center to address a generation de ined by direct communication and unique experiences.

Various slides from a student created lecture on Generation Z and Generation Alpha



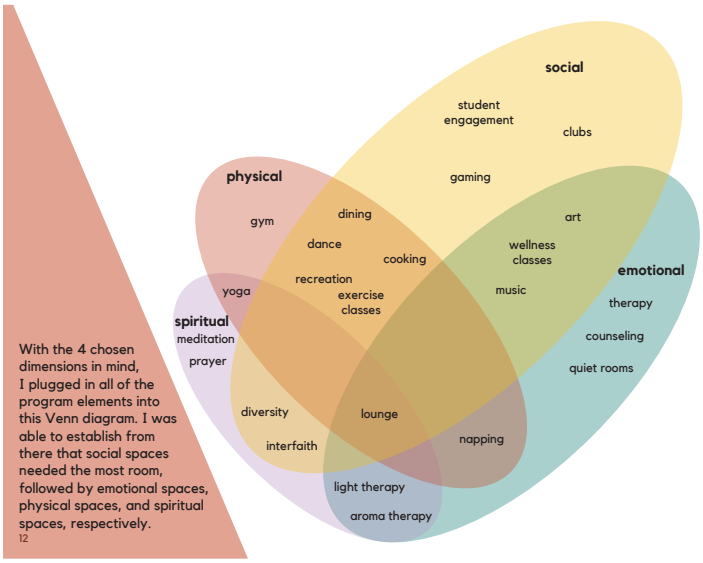




Appendix:

An exploration of wellness in the built environment: Redefining the college campus center to address a generation de ined by direct communication and unique experiences.

STUDENT A:



STUDENT B:

Diagramming: Self discovery phase. Students had to define mental wellness for themselves, their personal health and then for others in their generation. This created some really interesting adjacencies and challenges with transparency in the design process.

STUDENT C:

Self Analysis

Honestly asking myself what I need to be well.

WHAT DO I WANT?

	ON A GOOD DAY	ON AN OKAY DAY	ON A BAD DAY
BY MYSELF	•Coffee/food •To be outside/ in the sun •Exercise •Draw/paint •To be around "the buzz" of campus •Something fun/exciting/stimulating	•To be around people but not with people •To do "heads down work" •Something productive •Something different from my normal routine •To be outside- maybe around people or maybe not	•To be totally alone •Movie/TV •Something distracting or soothing •To be alone outside •To read •To cry •To pray/meditate •To sleep •Focus
WITH SOMEONE	•Coffee/food •To be outside/ in the sun •Group Exercise •Draw/paint •To be around "the buzz" of campus •Something fun/exciting/stimulating •To explore/try something	•Take a walk •To be outside/ in the sun •To sit but not talk with someone	•Movie/TV •To talk privately •To cry •To pray/meditate

Self Analysis

How can I translate my wants/needs into the built environment?

WHAT IS THIS SPACE?

ON A GOOD DAY	ON AN OKAY DAY	ON A BAD DAY
•Cafe/grab and go •Natural light/garden •Gym, yoga studio,etc •Art therapy room •Collaboration and lounges **•Something fun/exciting/stimulating**	•Nook,compressed space •Workstation **•Something productive** **•Something different from my normal routine** •Private space/nook/ area in an outdoor space	•Pod •Theatre •Water feature, greenery, fireplace •pod outside •library,pod with natural light •pod •Prayer/Meditation room •Nap zone/room •Pod/small collaboration room
•Cafe/grab and go •Garden/quad •Group Exercise studio •Group art classroom •Different areas of collaboration **•Something fun/exciting/stimulating** •cooking class, gym,meditation, gardening,etc	•Track, circulation space •Garden/quad •Small lounge space adjacent to other activities	•Theatre •Pod/small collaboration •Pod •Group Prayer space/group meditation

Appendix:

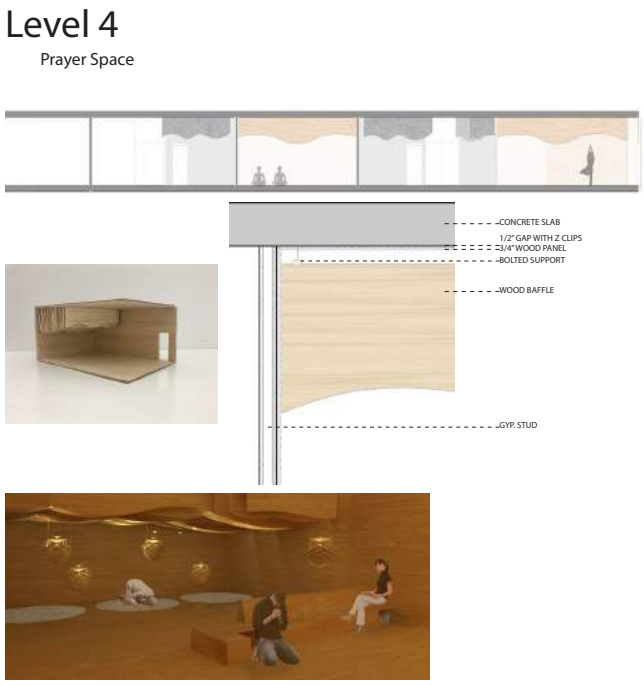
An exploration of wellness in the built environment: Redefining the college campus center to address a generation de ined by direct communication and unique experiences.

STUDENT A:

STUDENT B:

Renderings from various projects that express opportunities for communication or individual experiences.

STUDENT C:



STUDENT D:

Bonjournal: Using a travel journal app to connect with peers and deliver course objectives

Heather Carter
Oklahoma State University
Stillwater, OK

Considered to be the most diverse generation in U.S. history, college students born after 1996 are part of the 68 million Americans who make up Generation Z (Dimock, January 17, 2019). Because college students now acquire significant amounts of knowledge through the Internet, traditional teaching methods are not suitable for educating Gen Z nor for building relationships with them. Mobile devices and digital applications (apps) are extensions of their self-identities that rarely leave the presence of these students (Belk, 1988; Green, 2019). Research suggests smartphone use in Gen Z provides significantly higher enjoyment, positive emotions, and relief from negative emotions than in older generations" (Jiao, 2018). A method of understanding Gen Z students is by exploring their use of digital media as a connection to their peers and as a delivery method of course objectives. The research goal of this study was to investigate how, during a three-day Supervised Field Experience in a different city, a sophomore interior design cohort (N=19) from a land-grant university interacted with each other and their three field experience instructors using a free travel journal app, Bonjournal, to achieve seven course objectives. Students downloaded the app and submitted a brief trial assignment prior to their field experience trip. During the trip they kept elaborate and detailed field notes on their experience visiting architectural firms, showrooms, a manufacturing site, two museums, restaurants, a hotel, and an urban park. They were asked to focus on elements of socializing, career goals, and learning and sensory aspects within these environments. They added photographs to Bonjournal that supported daily assignments exploring questions related to course objectives. At the end of the semester, students completed a Survey Monkey using a five-point Likert scale questionnaire about their Bonjournal app experience. There was a 95% completion rate for the survey. Findings suggest diverse student experiences using Bonjournal. They overwhelmingly liked using the app more than they would have enjoyed writing a paper about their experiences, and generally, students met course objectives using the app. However, less than 18% of students indicated that using the app helped them connect with other students on the study trip, even though they felt they coalesced as a cohort and developed meaningful relationships with each other during the trip. This suggests that mobile apps are an element that can be used in building relationships, but they are part of a layered process incorporating a variety of elements. Because Gen Z is

accustomed to collaborative learning, incorporating elements that complement mobile devices in a collaborative manner might benefit relationship development (Nichols & Wright, 2018). Summaries compiled into PDFs by students (using the Bonjournal website) are currently being analyzed with NVivo qualitative software. When finished, emerging themes related to collaborative learning experienced during the trip will be synthesized. This study contributes to understanding how interior design educators may incorporate mobile devices and digital applications as part of relationship building within a class and as a method to deliver course objectives.

References

1. Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research*, 15(September), 139-168. Retrieved from https://doi.org/10.1086/209154.
2. Dimock, M. (2019). Defining generations: Where Millennials end and Generation Z begins. *Pew Research Center*, 17, 1-7.
3. Green, M. (2019). Smartphones, Distraction Narratives, and Flexible Pedagogies: Students' Mobile Technology Practices in Networked Writing Classrooms. *Computers and Composition*, 52, 91-106.
4. Jiao, Y. (2018, October). Research on Mixed Teaching Reform of Applied Undergraduate Colleges. In *2018 3rd International Conference on Politics, Economics and Law (ICPEL 2018).* Atlantis Press.

During the Dallas tour, you will keep elaborate and detailed field notes on your experience visiting architectural firms, showrooms, a manufacturing site, two museums, restaurants, the hotel, and Clyde Warren Park. Focus on elements of your experience such as socializing, career goals, learning and sensory aspects that go beyond the obvious. Notice sights, sounds, smells, tastes, touches, and emotions, as well as events, words and social interactions. Ground your interior design research in explorations supporting your career aspirations and how the Dallas perspective helps to broaden your knowledge of what is available for your future.

1. Collect photos as artifacts added to Bonjournal which support each of the daily assignments below in bold text.
2. Append the photos that you take with field notes in the Bonjournal application and reflect on and share insights from your observations.
3. Shoot photographs of observations and experiences related to your career interests. Try to create a balanced perspective of your experience as both an end user in interior environments and an interior design student as you answer the daily questions.
4. At the end of the course you will summarize your research and add some conclusions you have drawn about your Dallas experience. Compile your pdf with the attached instructions and upload it by the assignment 2 due date to the course drop box on D2L.

Daily Assignments to incorporate into Bonjournal

Wednesday 3/27: Steelcase, Corgan, Perkins+Will, Le Meridien Hotel & Restaurant Dallas, Alumni

- What did you observe as some of the differences and similarities between Corgan and Perkins+Will as design firms? What types of projects do they work on?
- What is systems furniture and how does it work together with other furnishings, objects, materials to support the design intent of the project? Do you think Corgan or Perkins+Will potentially use Steelcase in their projects? Why or Why not?
- How do Steelcase, Corgan, and Perkins+Will influence human and environmental wellbeing with the use of furnishings, objects, materials, and finishes in their projects?
- What entry level career opportunities do Steelcase, Corgan, Perkins+Will have for graduates with your interior design education? Do any of them provide options for advanced study?
- What types of career opportunities and options for advanced study did an education with OSU provide the alumni with whom you visited?
- What does it mean to collaborate on projects at Steelcase, Corgan, Perkins+Will?
- What is the nature and value of integrated design practices for Steelcase, Corgan, Perkins+Will?
- How was your interaction with Le Meridian's hotel and restaurant environments different than your previous hospitality experiences? What was better? How could the designers have improved customer experiences?
- Document your research in Bonjournal app.

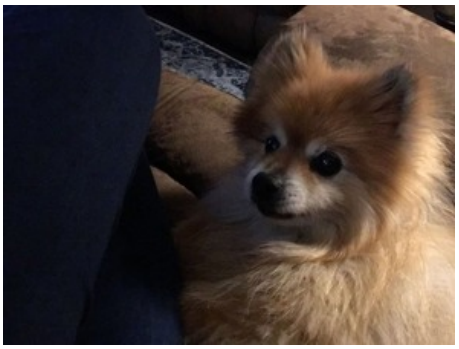
Thursday 3/28: Gensler, Wilson Associates, Klyde Warren Park, Toyota Headquarters, DMA

- What did you observe as some of the differences and similarities between Corgan, Perkins+Will, Wilson Associates and Gensler? What are Wilson Associates' and Gensler's specialties?
- What systems furniture manufacturers does Toyota use and why?
- What are some of the workplace strategies Krystin Schaedler employs at Toyota Headquarters?
- How does Toyota influence employee and environmental wellbeing with the use of furnishings, objects, materials, and finishes in their workplace projects?

- What entry level career opportunities do Gensler, Wilson Associates, and Toyota facilities management have for graduates with your interior design education? Do any of them provide options for advanced study?
- What does it mean to collaborate on projects at Gensler and Wilson Associates?
- What is the nature and value of integrated design practices for Gensler and Wilson Associates?
- How was your interaction with Gensler's, Wilson Associates', and Toyota's workplaces different than your previous corporate experiences? What was better? How could the designers have improved employee experiences?
- Describe Klyde Warren Park and the DMA as interactive entertainment destinations. What are some of the differences in potential interactions between these two environments? How are smaller environments created within these larger spaces?
- How does the DMA digital app create interactions in the physical environment?
- How do Klyde Warren Park and the DMA contribute to human and environmental wellbeing with the use of furnishings, objects, materials, and finishes?
- Document your research in Bonjournal app.

Friday 3/29: Momentum Group, Charles Alan Manufacturing, Kimball Museum

- How does Momentum Group influence human and environmental wellbeing with the use of sustainable textiles?
- What entry level career opportunities do Momentum Group and Charles Alan Manufacturing have for graduates with your interior design education? Do any of them provide options for advanced study?
- What does it mean to collaborate on projects at Momentum Group and Charles Alan Manufacturing?
- What are concerns for a manufacturing facility that are different than museum facilities? What are similar concerns?
- What is the nature and value of integrated design practices for Momentum Group and Charles Alan Manufacturing?
- How was your interaction with DMA, Kimbell, and Piano environments different than your previous museum experiences? What was better? How could the designers have improved user experiences?
- Describe the Kimbell Art Museum and Piano Pavilion as interactive entertainment destinations. What are some of the differences in potential interactions between DMA, Kimbell, and Piano environments? How is natural lighting used differently within their spaces?
- Document your research in Bonjournal app.

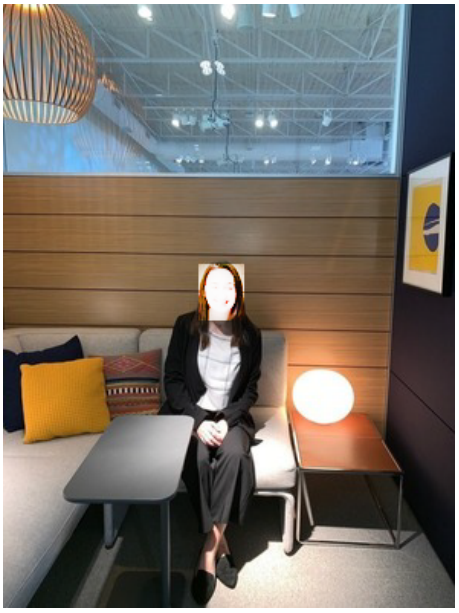


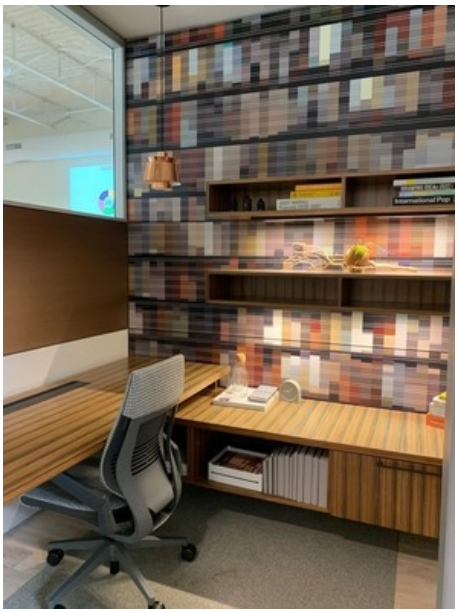
11 Apr 2019

5:30 pm
Day one - Wednesday

I got up at 6am in the morning so I could be ready on time and make it to the bus early. I had one of my close friends drive me to the bus, so I did not have to worry about where my car was going to be parked for the next three days. I was one of the first to arrive to the bus in the morning and made myself comfortable in the third row. I was not looking forward to the bus ride considering the fact that I had just made the exact same trip multiple times coming back from spring break. The trip did not feel as long, and I expected it to be, thankfully.
We arrived at Steelcase in Dallas a little before 12:30. When we all made it inside their showroom, they had provided us with a nice lunch and we all sat down to eat while there was a presentation presented to us about what Steelcase does. Steelcase offers a range of architecture, furniture and technology products to help people in healthcare, education, and corporate settings reach their full potential. The company is 107 years old and their first products was a steel waste basket. While sitting and eating our lunch, we all discussed the modes of work which are focus, collaborate, learn, socialize, and rejuvenate. We rated each mode on how much time we spend doing each a day, and I seemed to be pretty evenly spread out across the five modes. Once we were done discussing we all got to walk around the showroom to see their individual pieces and how they had their spaces set up. I personally really enjoyed their personal/rejuvenation stations. I think they are important to have and could be beneficial to some employees who need some alone time or time to process something that may have happened during their work day.
Next, we headed over to Corgan around 2:30. Corgan is one of the leading architecture and design firms and has a human centered approach. They have expertise in aviation, commercial, data centers, education, healthcare, and interior design projects. We were greeted in the front lobby then taken to a room where we could all sit during a presentation. Corgan works a lot with American airlines, and since they specialize in aviation, I was interested and asked a few questions on how people ended up in the aviation specialty. Turns out that it really just depends on what positions are open for new people who are hired and through the interviewing process they decide if you are right for the position.
Corgan's building was being renovated and was very close to being finished while we were there so we only got to see a few parts of the building. During our visit we got to learn a little more about their culture and new exciting things they are launching which I thought was neat to be able to see and made me want to maybe go back and see what their newly renovated building looks like once it is finished.
Our last firm trip of the day was to Perkins+Will. They were founded on the belief that design has the power to transform the lives of clients, cultures, and communities. They also embrace diversity and inclusion which I thought was really neat. They are located in a building that once was the first high school in Dallas. They renovated the building but kept a lot of its original character. Our visit at Perkins was quite short, but when I got around to asking how they push their community beyond socially constructed barriers and stereotypes, they talked about how at the time when we were there, they were embracing the women in the office and were recognizing them on a board near the entry and they also have clubs/meetings that they have for other people in the office.
Later that night, we had dinner with the alumni at the hotel we were all staying at. I really enjoyed this experience because I did not realize how many different ways I could go with a interior design degree and it was really eye opening to talk to people who were in our shoes one day, and seeing what they are doing now. I do not think I ever thought to work in the furniture industry, but it seemed to be very popular and a very educational opportunity. Some of them also opened my eyes about some things in the hospitality industry that I would have never really thought of. Overall, I am very thankful for the opportunity to speak with people who can give me ideas in what I can do after I graduate and reassure me that even though I do not know exactly what I want to do that it is okay, because they were just like me not too long ago.
After the dinner a few of us hung out and chatted. We got a little hungry and decided we wanted to order some pizza and so I ordered it. About an 30 minutes to an hour later I called the pizza place and they said they had lost my order. By the time I found out that had lost our order, it was really late and i let it go for the night. We all went to bed and the second that we all

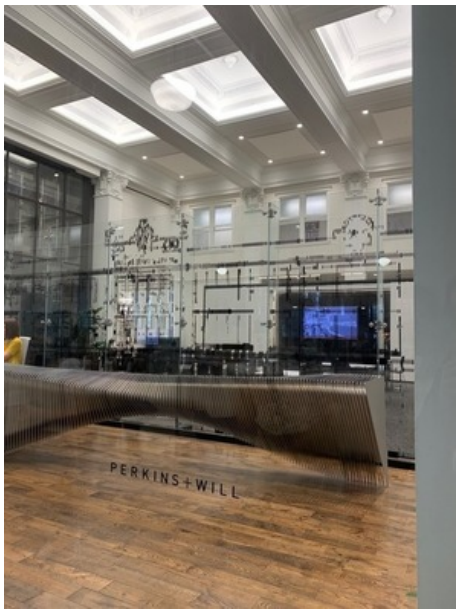
turned the lights off and calmed down, someone knocked on our door. And of course, it was the pizza arriving over an hour later once we were all trying to go to bed.

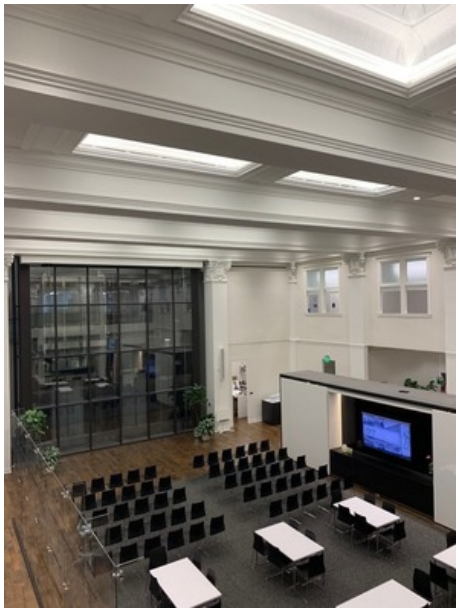


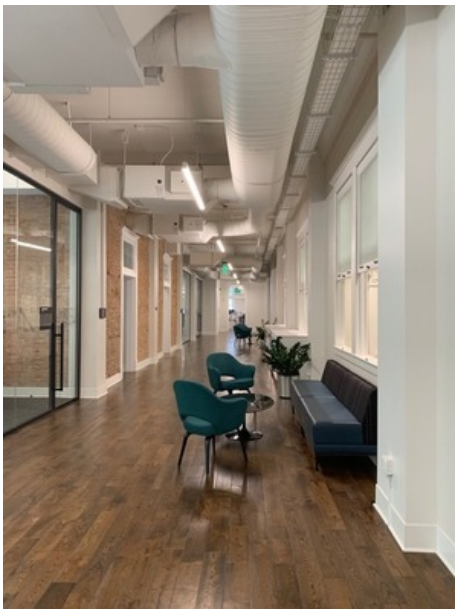


6:00 pm
Wednesday Questions

Overall, Perkins+Will is more sustainability driven compared to Corgan and Steelcase. Though, all of then talked about being LEED certified. Corgan and Perkins had similar work environments and it could be possible that they use Steelcase in their work environments because it is easy and functional. I Do remember hearing that Corgan used some Herman Miller as well. Systems furniture is like a set of furniture sold by a certain manufacturer and it is possible that Steelcase could have provided furniture this way to Corgan or Steelcase. Steelcase influences human and environmental wellbeing in a few ways. We all noticed how they do not have trash cans at their desks because they want employees to get up and walk to a trash can. They also talked a lot about biophilia and how the life cycle of a product and end life is what is really important to them. Corgans building follows a green building code that Dallas requires, and they hire sustainability expertise. They are also going for a LEED certification in their new expanded building. Perkins+Will is very sustainable and has no stains on their interior, and everyone that works there is required to be LEED certified. They are also trying to get a Fitwell certification to show the wellness of their employees. You can attend fairs and probably be able to meet all three firms. Steelcase has a lot of jobs offered in Michigan, they have interns, market sectors, and you can even go into product development. At Corgan, when looking for a job, it is mainly by what is open and you just go through the interview process. Perkins+Will seemed somewhat limited to interior design positions as they do a lot of architecture. Perkins+Will pays to have all of their employees LEED certified though. When talking to the alumni, OSU's study abroad program seemed to help out Sally with finding her passion for furniture. Other alumni also mentioned job fairs, research study, and the shift convention. My experience at Le Meridian was very fun. It was a nice hotel and was better than some other experiences I had before. The people working there were also very nice.







8:00 pm
Thursday

Our first stop on Thursday was Gensler, and we departed from the hotel at 8am. Gensler works collaboratively with clients and communities to create buildings that work well on all levels. At Gensler, we all ate breakfast and sat in a conference room while we were presented to. Genslers' building is new to them, and we are lucky to have seen the final touches as they hadn't even had a photographer come in and take pictures of their new work spaces yet. During the presentation, they showed us a little bit of what Genlser does and how they do a lot of branding. We also got to see a little bit of a project they are working on right now and have been working on it for three years now, the American Airlines headquarters. I really enjoyed the design of their building and their workspaces. They had a really cool moss wall feature that was a really nice concept. When we were done at Gensler, we all ran across the street to get some coffee at Starbucks, which surprisingly did not take as long as I had anticipated. Once we all got on the bus, we headed to Wilson associate, which I was excited for after looking at their website. Wilson associate has a collection of global studios that provide interior architectural design, architecture, art consultancy, concept development, branding, and food and beverage design. I personally have been interested in hospitality, so this visit was eye opening for me. When we all got upstairs to their office, we were greeted by a cute dog then all moved into a conference room. The visit we had turned out to be very informational. Wilson associate does hospitality, large scale residencies, luxury design, and even yachts. We were all given some very helpful information about what they would possibly look for in a employee which was a good portfolio, active in other activities, being involved in industry events, work time, and a good personality. Some tips they also gave us to help us reach our goals was to write everything down, ask questions, and don't let your pride get in the way of your design. Overall, I liked what Wilson associate does, but their work setting cannot even compare to Genslers. After Wilson Associate, we all went to Klyde Warren Park for some fresh air and lunch. Once we all got our food we gathered some tables and most of us sat together and talked about the places we had visited and how we felt about them. Once we finished eating, we headed to the bus to head to Toyota headquarters. We got there around 1-1:30. I had heard about this place but did not know what I was about to experience when I walked in. It was by far one of the most exciting buildings we had visited. The whole facility is 2.1 million square feet and they actually teamed up with Corgan on the building and the business interiors. They had decided that they wanted it to feel like a college campus. The headquarters literally had everything, a gym, and pharmacy, a grocery store, you could get massages, or visit a doctor, literally you name it, they probably had it. I once had to ask how much of the building she sees in one day and she said it depends on where they get their meetings scheduled, but when she does go to meetings she sometimes has to consider how long of a commute it will be to get to the meeting from her desk. Another thing I wish we got to see was the museum they are currently building but it unfortunately is not done yet. By the time we left Toyota headquarters, we were all extremely exhausted. We went back to the hotel and basically all took naps to prepare ourselves for the Dallas Museum of Art. We left the hotel around 5:30 to get to the DMA at 6. At the museum we all had to do a scavenger hunt through the museums app. We were all so turned around and lost half of the time but thankfully the people working were really kind and helped with giving us some clues. Once we finished the tour, we walked to dinner and chatted for a while. Then we got back on the bus and headed to the hotel for the night. A few of us planned on hanging out, but we were just way too tired for that.

Making Connections: Students, Faculty, Clients, Community

Valerie Settles
University of Central Oklahoma
Edmond, OK

Educators know experiential learning is critical to career preparation, and when this coincides with serving the community, students grow as humans, as well as designers. In a study by Peres and Mesquita (2018), they learned that Generation Z students prefer these type of learning environments that provide hands-on experience. But how can educators provide relevant experiences for students who have different skills sets and value systems than our own? Experiential and service learning are natural partners as they allow students to synthesize knowledge in a different way while working for a client who may be part of an underserved population. A study conducted by Zollinger, et al (2009) established four criteria for successful service learning projects; they must 1) relate to course objectives; 2) apply course knowledge; 3) connect to the community; and 4) reflect on learning (Zollinger, Guerin, Hadjiyanni, and Martin, 2009). To ensure these projects are successful in supporting the needs of Generation Z, they must also allow students to strengthen skills in problem-solving and decision-making. A working studio within an interior design program of a southwestern university has a goal to serve the community, and is the perfect vehicle for helping students participate in both experiential and service learning while meeting the criteria described above. Working with partners in the community, students have been exposed to organizations and people they otherwise may not have encountered. These have included a K-12 school for the deaf, a school for homeless children, and a community organization that supplies everything for the interiors of homes for the recently homeless. The needs vary, but a typical project involves a site visit and client interview, development of necessary plans, selection and specification of FF&E, and rendering of the final solution. Informal debriefing sessions called “Lessons Learned” follow each project so students and faculty advisor can reflect on the project. In a longitudinal version of this process, alumni were surveyed to learn about their perceptions of the experience. Student comments included: “This course taught me about truly listening to the client and what they really wanted, instead of dictating the total aesthetic of the design.” When asked what students learned about themselves in this course, some commented that they learned: “[Their] love of working with the public and the value of interior design to the community.” “Working with people who live their lives differently than I do can produce a great relationship.” Unsolicited comments by clients included: “Thank you for all

your hard work in designing our library. We are so excited!!! There are plans to begin work this summer." And then after the project had been completed, the client followed up with "The library is a happier place to be!" It is an educator's hope that we provide experiences that allow us to connect with students in meaningful ways. Examples such as these illustrate the impact interior design can have and serve as eloquent proof to students of the importance of their profession.

References

1. Peres, P., & Mesquita, A. (2018, November). Characteristics and Learning Needs of Generation Z. *In ECEL 2018 17th European Conference on e-Learning* (p. 464). Academic Conferences and publishing limited.
2. Zollinger, S.W., Guerin, D.A., Hadjiyanni, T., & Martin, C.S. (2009). Deconstructing service-learning: A framework for interior design. *Journal of Interior Design*, 34(3), 31-45.

WORKING STUDIO
Fall 2018

COURSE DESCRIPTION
This capstone course is a working design studio managed and staffed by interior design majors who work with campus and community clients, vendors, and a team of designers. Students make formal presentations of concept proposals and solutions to the client for approval. Prerequisite(s): Junior standing or above and permission of instructor required.

TRANSFORMATIVE LEARNING
We help students learn by providing transformative experiences so they may become productive, creative, ethical and engaged citizens and leaders contributing to the intellectual, cultural, economic and social advancement of the communities they serve. Transformative learning is a holistic process that places students at the center of their own active and reflective learning experiences. We engage students in transformative learning in six core areas: 1) discipline knowledge; 2) leadership; 3) research, creative and scholarly activities (problem solving); 4) service learning and civic engagement; 5) global and cultural competencies; and 6) health and wellness.

LEARNING OUTCOMES (Transformative Learning Experiences / *CIDA Standards*)
Upon successful completion of this course, students will be able to:

- Develop a viable concept to meet a client's needs (1) *(8c, 8f, 8g, 11b)*
- Analyze and critique the effectiveness of a design (3) *(7d-e, 8c-d, 8f-g, 8i–k,9d, 13f)*
- Gather information necessary to design development through contact with industry professionals in a variety of formats (3,5) *(8h, 13d-f)*
- Develop a valid and persuasive rationale for design decisions (3) *(4b, 4e)*
- Utilize knowledge and design skills to produce documents consistent with the level required in professional design work (1) *(9e)*
- Make effective oral / written presentations to a client that communicate the design solution (5) *(9a–c, 9e, 15d, 15j)*
- Work effectively with other students in a team environment to develop a design solution that meets a client's needs (2,5) *(5c, 5d, 5e)*
- Serve as project manager to guide a project to completion (2) *(5d, 6f)*
- Gain experience working with clients and budgets (1) *(6f, 6h, 9f)*
- Practice professional behavior & dress (5) *(6h)*
- Serve the community (4) *(4d, 4e, 4f)*

This course is designed to imitate a professional interior design studio. Students serve as programmer, designer, project manager, and production assistant. Emphasis is placed on innovation, creativity and expansion of the individual's frame of reference combined with practicality and feasibility. Through the studio experience, the student will develop confidence interacting with clients, perceiving solutions to design problems, creating construction documents, and presenting design solutions. Students will grow as decision makers, creative problem solvers, and persuasive communicators. This is a demanding class – expectations and standards are high. This includes on-time attendance, professional speech, attire, and behavior, participation, excellent work, and impressive presentations.

GRADING

Numerical scores will be assigned in accordance with the expectations of the instructor and the department. Numerical grades will be based on the following 100 point scale:

90 – 100 (A) 80 – 89 (B) 70 – 79 (C) 60 – 69 (D) 0 – 59 (F)

The grade for each student will be divided equally between instructor and peer evaluation. For each project, students will complete a peer evaluation and provide information related to the approximate number of hours spent on the project, division of project components among the group, and quality of work produced by other group members, as well as other specific comments related to the project. This evaluation is seen only by the instructor and will be destroyed when no longer needed. The instructor evaluation for each student will be based on their contribution to the group and their ability to work well within the group environment, as well the observed level of organization and communication among members.

The instructor will evaluate the success of all projects with consideration for:

- **Oral Presentation** – relevance of content and preparation of the speakers, confident delivery, organized information, and originality of visual aids and overall presentation.
- **Collaboration** – equal contribution of all team members, professional demeanor and conflict resolution, clear understanding of required tasks, and effectiveness of communication.

See the attached rubrics for examples of peer evaluation, oral presentation, and group assessment.

TYPICAL WORK PROCEDURE

- Clients call instructor and discuss project; initial project meeting is scheduled.
- Students meet with client to gather programming information and view space.
- Students discuss the project, brainstorm, and start conceptual sketches. Each project will have a project manager to direct the process and ensure work is completed on schedule. A unified design direction should be agreed to and work load divided. Students are expected to actively participate in this course and should be prepared to discuss the merits of the work of each team member and **respectfully** offer (and accept) constructive criticism.
- Students produce plans, renderings, and a final project book for clients.
- The instructor reviews all deliverables **extensively** prior to printing, which cannot take place without approval; this can be a lengthy process and adequate time should be allowed in the project schedule. No work will go to the client if it is not as perfect as we can make it; when working with clients there is no such thing as "this is as much as I can get done so I am willing to take a 'C' on this project." **They may build what is drawn, so it has to be correct**.
- Students write and rehearse the presentation with instructor, and then present the final design to client.

RECOMMENDED TEXTBOOKS

Cherry, E. *Programming in Design: From theory to practice.* Hoboken, NJ: John Wiley & Sons, Inc. ISBN 9780471196457

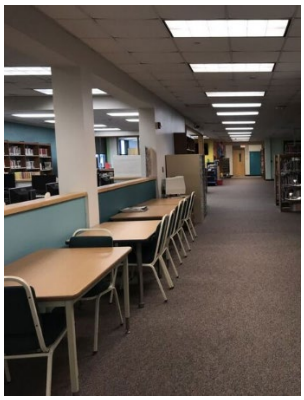
Ching, F.D.K. & Winkel, S. *Building codes illustrated: A guide to understanding the International Building Code*. Hoboken, NJ: John Wiley & Sons, Inc. ISBN 0471099805

McGowan, M. & Kruse, K. Ed. *Interior graphic standards*. Hoboken, NJ: John Wiley & Sons, Inc. ISBN 047140568X

Mitton, M. *Interior design visual presentation: A guide to graphics, models, and presentation techniques.* (2nd Ed). Hoboken, NJ: John Wiley & Sons, Inc. ISBN 9780471741565

Piotrowski, C.M. & Rogers, E.A. *Designing commercial interiors*. (2nd Ed).). Hoboken, NJ: John Wiley & Sons, Inc. ISBN 9780470723493

Project Photos Spring 2017
Interior design of a library in a K-12 school for the deaf

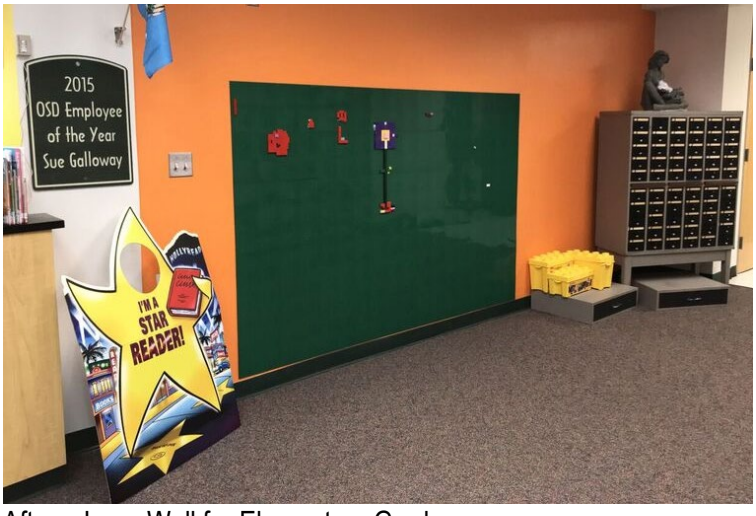


Before – Library Stacks & Research Area

After – Teen Only “Coffee House” Reading Area

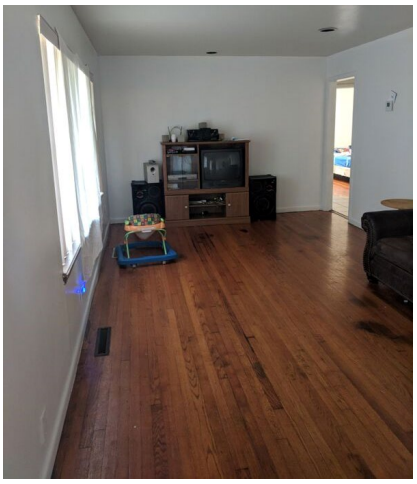
After – Reading Area w/ School Logo & Bean Bags

After – Secluded Reading Area adjacent to Lockers



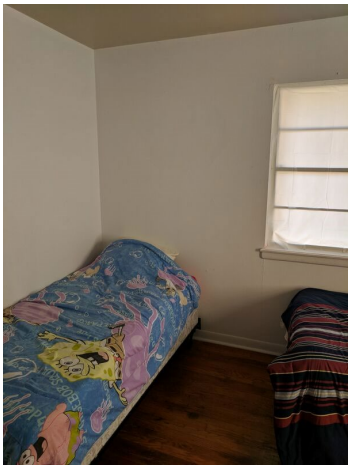
After – Lego Wall for Elementary Grades

Project Photos Fall 2017
Interior design for a family of 9 recovering from homelessness



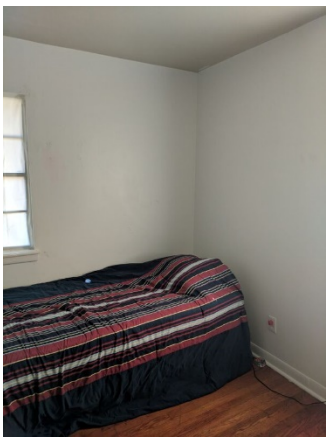
Before – Living & Dining Rooms

After – Living & Dining Rooms



Before – Girls Room

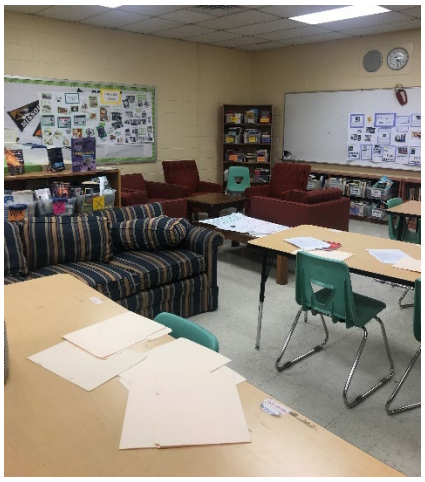
After – Girls Room



Before – Boys Room

After – Boys Room

Project Photos Fall 2018
Interior design for the reading area of a classroom for at-risk middle school students



Before – Lounge Chairs in Reading Areas

After – "Coffee Shop" Area

After – Greenery with Floor Seating

After – Inspirational Artwork

After – Overview of Areas

After – Lounge Area with Sofa

Teaching design principles and elements to Generation Z students through the American School Philosophy: An iterative design longitudinal case study between Bruce Goff homes and design/build furniture

Natali Ellis
University of Oklahoma
Norman, OK

Teaching method emphasis used in interior design courses Composition of good art or design involves the thoughtful use of design principles and elements. The knowledge and understanding of contrast, balance, harmony, color, shape and line among others enables the designer to flourish (Grundler & Grundler, 2017). The eclectic works of Bruce Goff and his American School Movement students unabashedly convey key principles and elements of design and are useful for associative student learning. As design principles and elements are foundational expectations as exemplified by the 2018 Council for Interior Design Association's (CIDA) eleventh standard, we can understand their instructional learning merit. These theories are profound and as such educators continue to seek innovative methods with which to communicate to a digitally evolved student populace. Today, there is a contemporary student cohort born between 1995 and 2010 known as Generation Z. Generation Z is digitally native, and as, such over fifty percent of the students have remarked that they are connected on line for at least 10 hours per day of which two hours are spent watching videos (Doucette, 2018). How do we impart essential principle and element learning in this new paradigm when this knowledge understanding is traditionally communicated through lecture and abstracted learning? The following presentation seeks to declare that an immersive design learning experience asking students to consider Bruce Goff's inspiration works in a full-scale furniture build is such a key. Problem identification When introduced in the first portion of a student's design education, design principles and elements are often taught through abstracted projects. The process can be tedious for students to emulate and to feel successful. Bruce Goff's architectural style is known for its use of exaggerated form, shape, and texture which make the transition easy for a student to follow and identify key design principles and elements (Architects, 1985). In turn this confidence summons the students to deeply engage in a hands-on furniture design immersive build. Much like the technology world that they are used to, the students create their own idealized world during the design/build process and rewarded through their investment. As such, learning is integrated and more easily sustained for the student's design future. Project strategy Over two years and five sections of furniture design studios, students first built a simple table. After completion of the table, students were

asked to consider a new table which would be designed to connect to their chosen Bruce Goff and Bruce Goff trained architects' inspirational homes. With their selected home, the students used an iterative process to build upon their own design knowledge (Ive, 2014) (Natale, 2009). The furniture components followed the design process through schematic design, construction documents, build, and presentation. The presentation asked the students to demonstrate the key connected principles and elements. Outcomes analysis In 2018, there were 24 homes as the initial study and in 2019, these 24 were narrowed to 10. Through an adapted content analysis, design principle and element counts/associations were compiled and grouped. The analysis sought to understand how each student saw their house through principles and elements, the degree to which their built project emulated the inspiration house and where there were common occurrences.

References

1. Architects, R. I. (1985). The American School of Architecture: The Bruce Goff Legacy. Philadelphia.
2. Doucette, D. (2018, October 25th). Meeting the Educational Demands of Generation Z. Retrieved from *EdTech Focus on Higher Education*: https://edtechmagazine.com/higher/article/2018/10/meeting-education
3. Grundler, M., & Grundler, L. (2017, September 1). The principles of design in visual arts. Retrieved from Education Close: https://educationcloset.com/2017/09/01/principles-design-visual-arts/
4. Ive, J. (2014, July 18). Objectified Documentary.
5. Natale, C. (2009). *Furniture Design and Construction for the Interior Designer*. United States of America: Fairchild.

Project 2 | Full Scale Object Building

Project Objectives:

- Develop **fluency, flexibility, and imagination** of furniture design and the design process through a complete construction and iterative opportunity.
- Integrate and become familiar with the design process through inductive and deductive reasoning, empirical knowledge, intuition, and judgment.
- Understand, select and applied appropriate materials as they relate to context, culture, technology, and production
- Continued knowledge of power and hand tools and the means to best accomplish end production object
- Appropriate use of joinery and attachment methods that best considers built component for strength, beauty, and durability
- Successful shop drawing / document interpretation and understanding as it applies to full-scale mock-up furniture component.
- Ability to complete a designed furniture full scale mock-up object from a completed set of produced furniture documents
- Prepare material stock into completed object
- Produce a final component with a market ready finish quality

Background:

Furniture can bridge the architectural practice with interior design. This project will ask you to complete a full-scale furniture object mock-up that will support, reference, connect to your selected reference. You can convey the connection through historical precedent research analysis and the idea of the term zeitgeist (of the time).

Central to this project, you will have the opportunity to be able to begin to build upon your furniture design skills and object craftsmanship. The opportunity to construct a piece of furniture allows us insight into the way that we conceive, design, create, specify, and make furniture designs.

The final presentation will include your final constructed object along with your object's marketing/development poster (approximate size to be 24" x 36") as this may vary on your object's complexity).

Furniture Object:

1. RE Design table from project 1
2. Wood: Poplar, Four board feet of 8/4 wood and five board feet of 4/4 wood.
3. One additional material of student's choice if it enhances overall RE Design; addition of new material will subtract from wood quantity.

Project Requirements:

- Discovery/ Programming Assignment
- Schematic/Design Development Activities
- Fabrication drawings

- Construction instruction process assignment, estimates (material/time). The process assignment will be the steps that you anticipate using once we move back to the Creating Making Lab.
- Cutting diagram (examples found in textbook, provided additional resources found on Canvas, from Project 1).
- Materials Legend and Key objects to cutting diagram
- Furniture Making in Creating/Making Lab
- Furniture making process booklet with working schedule with times, and reflection of each day's completed work session along with labeled photographs. It will be helpful if you are also reflecting on things that you feel that you did well in addition to the thoughts regarding the next design, documentation, and making.
    - Printed copy of all project work to be handed in with furniture object and marketing poster, a complete scanned pdf and furniture object jpg uploaded to Canvas.

Please submit a high-quality image of each of your final furniture piece and documentation in JPEG or PDF with your last name as the file name: smith.pdf) to the P2 Assignment on Canvas by 8:00pm May 2nd.

Materials and Supplies

Material quantity and wood type is set, and the additional material can be determined by the individual. Keep in mind that you want to connect the materials to your original furniture object. Take into consideration innovative and sustainable practices that we have discussed.

Project Schedule: Your schedule is held within the course syllabus. As a reminder you were given an estimation that assigned work would require approximately 15 hours of outside class time per week (in addition to actual contact class time hours) and that you are responsible for coordinating course work with your individual class schedule.

This estimation is only a guideline and you may finish more quickly or it may take a bit more time depending on your present skillset or any unforeseen conditions. The only way that we begin to understanding time estimation is to keep a log project book of time. Your final submittal will include a log of work sessions and what you accomplished during that time.

> *Class Time should not be considered as instrumental to make large gains in production time, but is used to profit your skill development and for that reason, you will have small discussion and lecture series throughout the project building timeline. Mini lectures will be considered to take 30-40 minutes of time with 1.25 to 2 hours of work time. Remember that you will need to include clean-up time to happen prior to the end of formal class time.*

Project Due: Canvas Submittal per syllabus. Furniture component and hard copies will be due at the beginning of class with presentation and critique.

2019 Homes of Influence

	Home Photo	Home Name	Architect	Date	Location	Website Link (s)
1		Ledbetter House	Bruce Goff	1947	701 West Brooks, Norman, OK	http://www.oudaily.com/making-a-better-house/article_dcb46719-071a-5d24-907a-40397f7501dd.html
2		Bavinger House	Bruce Goff	1951	730 NE 60th Ave, Norman, OK	http://newsok.com/article/3734654 https://en.wikipedia.org/wiki/Bavinger_House
3		Searing House	Bruce Goff	1965	7821 Fontana Street, Prairie Village, KS	http://www.searinghouse.com/photos.php https://shawneemissionpost.com/2012/06/11/with-goff-homes-tour-a-look-back-at-the-future-of-architecture-in-prairie-village-10468
4		Hyde House	Bruce Goff	1965	5020 West 67th Street, Prairie Village, KS	http://www.searinghouse.com/hydehouse.php
5		Triaero	Bruce Goff	1941	Jefferson County, Kentucky	http://www.gardenstogables.com/the-triangle-house-bruce-goffs-triaero/
6		Nicol House	Bruce Goff	1967	5305 Cherry Street | Kansas City, MO | 64110	http://www.kansascity.com/living/home-garden/article39352809.html
7		Ford House	Bruce Goff		Aurora, Illinois	https://mcarch.wordpress.com/2010/12/16/bruce-goffs-ford-residence-aurora-illinois-1948/
8		John and Grace Lee Frank House	Bruce Goff	1956	Salpulpa, OK	http://www.oklahomamodern.us/2008/06/house-of-clay.html https://www.youtube.com/watch?v=SX33ZE3_zYA
9		*Hall Residence* *Wilcox House* The Bradley Residence	Michael P. Johnson	2007	Scottsdale, AZ	http://www.sourcesfordesign.com/michael-p-johnson-design https://www.youtube.com/watch?v=BNPd0Pwvlso
10		Kelly Residence	Arthur Dyson	2001	Portola Valley, CA	http://www.petemoffat.com/the-building-process/projects/kelly-residence/ http://arthurdyson.com/

ID2793 P2 Ideation Grid_Phase 1

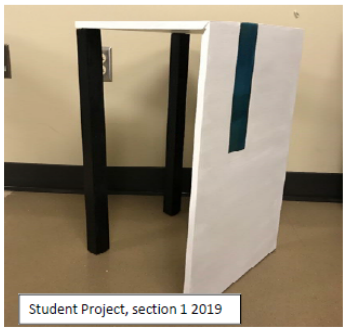
Student Name_____
Section #:

List one design principle and one design element found (can list more, but try for at least two)	Sketch and annotate:
Design Principle: Design Element:	Original object: sketch and **annotate** your original table in this square. This will be <u>one</u> annotated sketch.
Instruction: Now, you are going to RE Design the table based upon the key design principles and elements from your American school house of influence. Name of House and Designer:	
Design Principle: Design Element:	Sketch and **annotate** the **<u>primary identified</u>** principle (s) and element (s) in this square below (<u>hint, this is not the entire house but a detail that strikes you as significant</u>). You might have two drawings here or one if you need to use together. If you have identified more than one principle and/or element, you might have multiple drawings.

Goff Inspirational housing instructional models with student designed/built furniture outcome examples

The Bradley House by Michael P Johnson (b. 2007)

Transferred
Principles: Contrast, unity, repetition
Elements: Color, line, shape, balance



Student Project, section 1 2019

Student Project, 2018

Student Project, section 3 2019

The Ledbetter House by Bruce Goff (b. 1947)

Transferred
Principles: Contrast, Dominance
Elements: Color, line, form, shape, texture

Student Project, section 3 2019

Student Project, section 1 2018

Student Project, section 1 2019

The Beckoning Kitchen

Kathryn Brand and John Joseph Linn
High Point University
High Point, NC

THE PROBLEM: The lecture-recitation model of teaching which remains predominant in many college classrooms, engages most directly the passive and cognitive forms of learning. The notions of individual identity, values systems, and peer interaction remain outside the sphere of the student experience. THESIS/THEME: Conversational pedagogy provides platforms intended to include both emotional and informational digital connections that students are familiar with. Problem-solving environments that echo social media interaction calls for understanding and empathy while enticing co-authorship. The metaphor of the Beckoning Kitchen Table offers peer-based interactive settings that provide opportunities for active, affective, collaborative, and psychomotor learning. HYPOTHESIS: Implementation of guided activities within cloud-based digital platforms provide students with opportunities that host the nature of learning in a probing and relational setting. Students respond to inquiry through shared personal perspectives with layered findings embodying empathy, value, and engagement to propose intentional interpretations. The larger goals of creating a collaborative design community formed the basis for this exploration of a revised approach to a required technical drawing class for first semester sophomores in a design-based curriculum. The centerpiece of the pedagogy involved students working collaboratively in groups of three or four to complete both analogical and digital work. The intent behind this model is building relationships between students and content at a meaningful scale. Like a Beckoning Kitchen Table, this model facilitates the ebb and flow of a truly collaborative space and gives students pride of place and a sense of belonging with their peers. According to Alan November, where traditional educational models feature single audiences, a system of reward and punishment, and learning how to be taught, digital learning is a way to put the responsibility of learning in the hands of the student through increased collaboration, contribution, and research. The digital platforms were all cloud based and fall into one of two categories; Asynchronous platforms were used to allow students to work on their own time at their own pace. Activities such as reading, commenting, and peer assessment were within the purview of both Top Hat and Perusall. The pre-class readings and document annotation activities were hosted by Perusall. In-class, collaborative composition and content assessment fall under the purview of Top Hat and Teams. Top Hat provided the digital platform for the real-time assessment exercises. Teams provided the digital platform for students to provide feedback

to their peers, review their own work, evaluate their contribution to the group, sketch, share images, and organize thoughts collaboratively in real time. Here, students are instrumental in each other's learning. Within each group, individual students could observe peer contributions in real and/or asynchronous time with a variety of opportunities for response and interaction. Together, the activities provided a multi-dimensional approach to a learning environment which offered the opportunity for personal mastery and promoted the students' intrinsic motivation to learn. The intentional approach risked each student's willingness to become a 'significant partner', leveraging the possible rewards of personal confidence which often accompanies the shared success of collaborative discoveries.

References

1. Gurung, R. A., Chick, N. L., & Haynie, A. (2009). *Exploring signature pedagogies: Approaches to teaching disciplinary habits of mind*. Stylus Publishing, LLC.
2. It's About Learning. (2015). *The Head Won't Go where the Hearth Hasn't Been*. Retrieved August 27, 2018 from http://harapnuik.org
3. Mazur, E. (2014). *Peer instruction: A user's manual* (Pearson new international edition. ed., Pearson custom library). Harlow, Essex: Pearson
4. November, A. (2012). *Who owns the learning? : Preparing students for success in the digital age*. Bloomington, IN: Solution Tree Press.
5. Wiggins, G., & McTighe, J. (2005). *Understanding by design* (Expanded 2nd ed, [Nachdr.]. ed.). Alexandria, Va.: Association for Supervision and Curriculum Development.

Sprint LTE 3:15 PM 64%

Making sense of the chaos

Given that this image is computer generated, imagine if it was hand drafted. What would be the possible issues if all the text in this image was written freehand, based on the individual's handwriting instead of drafted according to architectural standards?

Showing most recent

Anonymous

2018-09-04

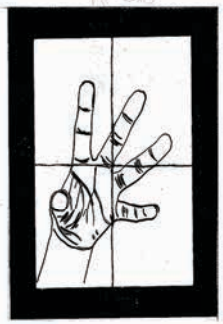
Drawings like thats need to be as neat as possible, so it is more practical for it to be drawn up on a computer than hand written

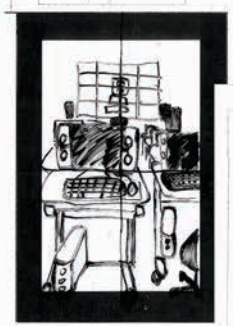
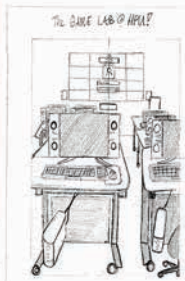
1 vote

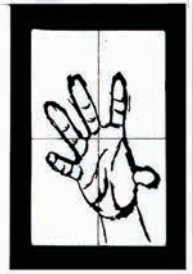
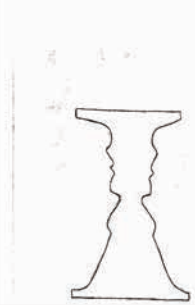
The drawing would likely

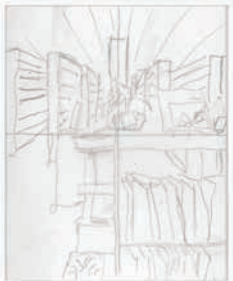
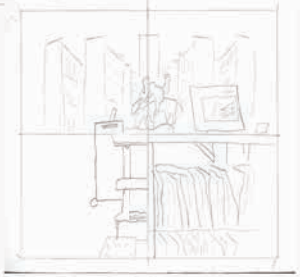
Reply

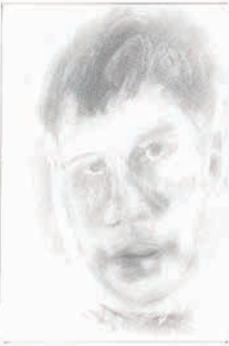
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123 space return




ALEX
Mack

Perusall

- Course setup
- Gradebook
- People
- Student view
- Notifications
- Notes
- Add to my calendar

Readings

Documents

- Human Factors in the ...
- The Interior Plan: Conce...

Assignments

- May 2: PROTOTYPE 11
- Apr 17: PROTOTYPE 10
- Apr 10: PROTOTYPE 9
- Apr 3: PROTOTYPE 8
- Apr 3: PROTOTYPE 8

Show more...

Chats

Groups

- Announcements
- General discussion

One-on-One

KB

Four Ways to Analyze Space Planning

Spaces may be analyzed according to the following considerations:

Spaces may be analyzed according to the following considerations:

1. Their physical characteristics
   - Open spaces
   - Enclosed spaces
   - Semienclosed spaces
   - Small spaces
   - Large spaces
2. The way they are combined and placed
   - Autonomous spaces
   - Connected spaces
   - Internal spaces
   - Perimeter spaces
3. The general function they perform
   - Main spaces
   - Supporting spaces
   - Service spaces
   - Storage spaces
   - Circulation spaces
4. Their degree of exposure
   - Public spaces
   - Semipublic spaces
   - Private spaces

Current conversation

ES

I feel like it is a good idea as a designer to take time to analyze the spaces in each of these four ways to determine the best possible way to arrange a space. It is important to know their physical characteristics to know the boundaries and possibilities while still keeping in mind that you are mainly designing for how the space will function and be put the the best use by the clients.

Apr 3 8:43 am

DM

I agree, I think that these four categories should be taken into heavy consideration, and not just independently but as a unit. All elements listed in this section will ultimately work together in order to promote the client's welfare and the overall success of the space.

Apr 3 11:03 am

KB

Enter your comment or question and press Enter. Mention a friend by typing @. Add hashtags by typing #.

Submissions Closed

When drawing at 1/8"=1' scale what does the 1/8" represent?

1 foot	4
1’	3
A foot	1
1foot	1
Its the scale you use for the drawing	1
Size of the scale	1

Show Word Cloud Show percentages Hide Graph Condense Text

11/11

Zoom 11/11 Resume Correct Responses

The Readiness Assessment: An Alternative to Portfolio Review

Sally Swearingen, Joe Strahl, Mitzi Perritt and Leisha Bridwell
Stephen F. Austin State University
Nacogdoches, TX

Problem Many design programs utilize an assessment measure to determine student readiness for upper-level coursework. Some faculty review student portfolios while others rely on skill-based testing (Clemons, Gibbs, Tremblay, Leigh, & Work, 2009). An assessment effort enables faculty to either limit upper-level enrollment and/or determines if lower-level students have mastered foundation design skills. This mid-level assessment also helps marginal students evaluate career direction. Method Program faculty elected to implement a one-day, skill-based testing process termed the Readiness Assessment. Student eligibility requires completion of 22 credit hours in interior design coursework, usually resulting in a second-semester sophomore standing. An early June test date allows grading completion in time for fall registration…either program advancement or remedial action. The test structure resembles NCIDQ formatting and involves one- and two-point perspective sketching problems (Pable, 2004), written communication, and space planning. Faculty identified these skills as essential for student progress to upper level studios. Students produce freehand sketches and floor plans to avoid technical issues during testing; the essay utilizes simple word processing for electronic submission. On all documents, a student number replaces the student name to insure anonymity in grading. Due to the early summer test date, the test schedule allows time for out-of-town students to arrive and return home in one day to prevent lodging costs. 9:30 am Check-in 10:00 am One-point perspective drawing (Appendix A) 10:45 am Two-point perspective drawing (Appendix B) 11:30 am Orientation to afternoon scenario 11:45 am Lunch (read scenario program) 12:45 pm Essay (Appendix C) 1:45 pm Break (set up for space planning) 2:00 pm Space Planning (Appendix D) 4:30 pm Closing Analysis During June, available program alumni and advisory board members grade the tests using the Readiness Assessment Evaluation Criteria (Appendix E). Faculty email students assessment results in early July. Students failing the test may retake the assessment once in early August. This date allows students to refine skills before the second test and yet register for the fall semester. Should a student fail the second assessment, faculty confer with the student on career strategies. Students may choose to repeat a course to strengthen a weakness and retake the assessment the following June. If a student wishes to change focus, faculty discuss other majors that may build on student interest. Conclusions The faculty concludes that the skill-based assessment works well for this interior

design program. In early administrations, sketching emerged as an area needing reinforcement. Faculty increased sketching instruction in lower-level studios netting higher assessment scores. Student space planning skills also needed improvement and speed; after more practice in developing bubble, prototypical, and block diagrams, student space planning scores likewise improved. Design faculty surveyed students for reactions to the last Readiness Assessment. When asked if adequate testing time was provided, 92% responded affirmatively. The majority (69%) indicated they strongly agreed that they were prepared adequately for assessment content. Concerning the testing environment, 84% expressed strong agreement that the testing environment was supportive. Both faculty and students regard the Readiness Assessment as a positive feature of the program.

References

1. Clemons, S., Gibbs, C., Tremblay, K., Leigh, K., & Work, R. (2009). No Portfolio Review! "Design Scenario" as Selective Advancement Process into the Interior Design Major. Conference Presentations of the Interior Design Educators Council 2009 Annual Conference, p. 184-198.
2. Pable, J. (2004). *Sketching interiors at the speed of thought*. New York, NY: Bloomsbury Academic.

Appendix A
(reduced)

ONE-POINT PERSPECTIVE EXERCISE

CODE NUMBER: _____

DATE: _____

COMPLETION TIME: _____

Using the image below, create a one-point perspective sketch from the view directly in front of the desk. You are to use the furniture pieces, window, and accessories in this image but be sure to include extra items to enhance the space. These can include all types of accessories, built-ins etc.

Appendix B

(reduced)

TWO-POINT PERSPECTIVE EXERCISE

CODE NUMBER: _____

DATE: _____

COMPLETION TIME: _____

Using the image below, create a two-point perspective sketch from the view on the bottom right where the arrow and person is standing. You are to use the furniture pieces, windows, and accessories provided in this image but be sure to include accessories to enhance the space.

Appendix C

READINESS ASSESSMENT

Essay Questions

Select one of the following topics to discuss in written form. The essay should be 225-250 words in length. Type the essay in Microsoft Word. Organize your thoughts into paragraphs with topic sentences. Use correct sentence structure, grammar, capitalization, and punctuation. Type your number in the header at the top left. Save your essay to the group flash drive.

1. Why did you select interior design as your major?
2. How does interior design better the world?
3. What is the contribution interior design makes to society?
4. What in your personal interior design style?
5. Who inspires you to succeed in life?
6. What is your inspiration in life?
7. What is the value of interior design?
8. Why does interior design matter?

Appendix D

RESIDENTIAL SCENARIO
COUPLES RESIDENCE /HOME OFFICE

STATEMENT OF THE DESIGN PROBLEM

You have been retained to design the residence of Mr. & Mrs. Ralph Martin. They are nearing the age of sixty and have decided since their three children are married, it is time for a change. They are tired of maintaining yard, pool, etc. and wanted more free time to "grand nap" their five grandchildren. One of the goals is to design their home for their future, using universal / inclusive design. Family is extremely important to the Martin's and they frequently have a grandchild spend the weekend. Mr. Martin is semi-retired and has turned over primary responsibilities of his real estate business to his sons. He still wants an office area within his home where he can conduct limited business activities and preview his computer.

The Martins have purchased space on the third floor of an eight story building with the anticipated residence office to occupy approximately 2,500 square feet. The residence is to include a Foyer, Office/Den, Kitchen, Living Room, and Dining Room, Master Bedroom, Master Bath/Dressing, Guest Bedroom, and Guest Bath.

THE BUILDING

The building is an eight story building, precast concrete structure. It has windows on all four sides with a view of a park to the north and a panoramic skyline view of the city to the southwest.

INTERIOR SYSTEMS

Note: The 6'-0" Public corridor runs the width of the building south of the space. It allows access to but is NOT part of the space.

a. Existing walls, windows, and columns are to remain as indicated on the floor plan.
b. All floors have glass from 9'6" down to 2'-6" above the finished floor sill.
c. Maximum ceiling height is 9'-6" clear with a plenum space for HVAC and electrical installations.
d. The original ceiling has been removed and will be replaced with newly installed gypsum board.
e. Power will be supplied through the ceiling of full height partitions.

CODE REQUIREMENTS

a. Develop your design to protect the health, safety, and welfare of the public.
b. Two means of egress are required into the residence; doors must swing in the means of egress and cannot project more than 7" into the building corridor.

a. Remember designing for the future; circulation spaces need to have 5’ turnaround clearance for a wheelchair in the Master Bathroom and public spaces.
b. The minimum corridor widths must be 44”.
c. All spaces shall utilize a 3’ door providing a clear opening of at least 32”, latch clearance of 18” on pull side and 12” on push side.
d. All sleeping areas shall have a window.
e. The length of a dead-end corridor shall not exceed 20’.

THE INTERIORS

a. Building standards interior walls are to be 3 -5/8” metal studs with 5/8” gypsum wall board on each side. (5”)
b. Building floors are concrete slab.
c. Interior walls for plumbing shaft to be indicated as 9” thick.

PROGRAM REQUIREMENTS

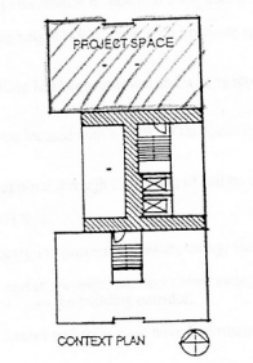
Areas to be planned and designed are as follows:

1. Foyer (wheelchair accessible)
    a. Locate the main entry door from the public corridor.
    b. Provide a minimum of 3 linear feet for guest and storage closet.
2. Office/ Den (aproximately180 sq. ft.)
    a. The office needs to be convenient to an entrance and the guest bath.
    b. To be located so guests will not disturb the residence.
3. Kitchen
    a. 16 square feet of work surface
    b. Double sink with a disposal
    c. Dishwasher
    d. 36” refrigerator/freezer
    e. Stacked wall ovens
    f. Microwave
    g. Cooktop with four burners
    h. Pantry/Storage 5’ wide x 15” deep minimum
    i. Casual dining for four (bar or table)
4. Living Room
    a. Comfortable seating for six
    b. Appropriate convenient surfaces for seating.
    c. Built-in wall unit for sound system / TV/ DVR/ etc. (18” deep)
    d. An eight-foot wall surface to display three paintings
5. Dining Room
    a. Dining table and seating to accommodate 8-10
6. Master Bedroom (200 sq. ft. min.)
    a. King Size Bed

   a. 2 night stands
   b. Storage piece
2. Master Bath/Dressing
   a. Two sinks with some counter space
   b. One toilet (think future –where would grab bars go)
   c. Shower
   d. Tub (30" X 60")
   e. Two walk-in closets
3. Guest Bedroom (200 sq. ft.)
   a. Convenient to Guest Bathroom
   b. Convenient to Master Bathroom (some grand-children are small)
4. Guest Bathroom
   a. Lavatory
   b. Toilet
   c. Tub/shower
   d. Towel storage

Instructions for Preparation of Design Solution

1. Read the program above twice/ make notes (15 mins.)
2. Take trash paper and do some bubbles (10 mins.)
3. Re-read program (5 mins)
4. Freehand or with straight edge in hand/ layout the spaces (50 mins)
5. On plan, locate walls with appropriate thickness, doors, etc. Furniture must be included.
6. Confirm it is dark enough to read, can always go over pencil with a felt tip / sharpie.
7. All built-ins MUST be shown.
8. Transfer design to your sheet. (30 mins) Lines do not have to be perfect. It is free-hand.
9. Label rooms (5 mins.)
10. 5 minutes to spare



Appendix E

INTERIOR DESIGN READINESS ASSESSMENT EVALUATION CRITERIA

Academic Preparation: HMS 206 & L, 208 & L, HMS 310 & L, and HMS 314 & L must be taken (or course equivalencies; transfer students, see below) before taking the Readiness Assessment for advancement to upper level courses.

Items to be judged on:	Points	Total Points	Comments (all students will receive feedback)
TRANSCRIPT, PHOTO ID COPY, and SURVEY COMPLETION *Cumulative GPA for all course work to date (see page 2) GPA Values: 10 Points = 3.5 or above 5 Points = 3.0-3.49 0 Points = 2.5 to 2.99 **Note: Students MUST have a cumulative GPA of 2.5 to participate in the Design Scenario*. ***(Effective Fall 2018)***	10		9:30 – 10:00 a.m.
COMMUNICATION SKETCHING 90 MINUTES TOTAL (1 PT Perspective) 45 Minutes Perspective technique/accuracy (5) Scale and proportion (4) Communication of space—architectural lines (floors, walls, windows) and furniture, cabinetry, accessories (3) Overall completion of perspective (3)	15		10:00 – 10:45 a.m.
(2 PT Perspective) 45 Minutes Perspective technique/accuracy (5) Scale and proportion (4) Communication of space—architectural lines (floors, walls, windows) and furniture, cabinetry, accessories (3) Overall completion of Perspective (3)	15		10:45- 11:30 a.m.
Lunch on your own			11:45 – 12:45 p.m.
ESSAY 60 MINUTES (Bring your laptop) Typed and printed (2) Grammar, punctuality, spelling (6) Clarity (3) Content and thoroughness of discussion (6) Conclusion or summary (3)	20		12:45 -1:45 p.m .
SPACE PLANNING /CONCEPTUALIZING 150 Minutes Concept (drawing) (4) Analysis/Interpretation of concept (4) Project requirements met (7) Application to client's needs (5) Adjacency of spatial allocation (7) Space relationship (7) Appropriate space planning of furniture (3) Creativity (3)	40		2:00-2:15 p.m. Questions 2:00 – 4:30 p.m.
TOTAL POINTS	**100**		

Total Score on ID Readiness Assessment _____ of 100 Points

Advance: YES _____ NO _____

Understanding generation Z's learning preference: an exploration of Extended Reality based learning tool for the experience age

Zahid Islam
University of North Texas
Denton, TX

In last few decades, design education and its practice have transformed from the 'industrial revolution model' to the age of information which prioritized access, accumulation and constructs of knowledge largely based on information technology. The advancement of certain technologies as cloud, big data, internet of things, machine learning and its associated infrastructural supports have prompted another shift toward 'Experience Age'(Wadhera, 2016) where the ubiquity of networked mobility and 'on-demand' creation and communication using technology-mediated 'experiences' became a normative process of learning for this generation Z students. Researches have shown that lack of motivation, disengagement, contextual isolation and higher degree of cognitive load resulted in ineffective learning (Capps & Crawford, 2013; Gee, 2009). It is also evident that a strong relationship exists between learner preferences, active participation and creation of meaning (Atkinson, 2004; Eishani et al., 2014; Kassim, 2013; Tsai & Shirley, 2013). Therefore, a new pedagogical approach need to be considered by employing suitable emerging modalities (Gül et al., 2008) that supports learning preferences of Gen Z designers of this Experience Age. Furthermore, adoption of new communication techniques for design pedagogy is essential for addressing difficult to teach aspects (Smith and Hu, 2013) as inclusivity, context, empathy, integrated system thinking, regenerative, information based decision making and such. Extended Reality (XR), an umbrella term for Virtual, Augmented and Mixed Reality can address these pedagogical challenges for communicating with Gen Z learners (Bailenson et al., 2008; Psotka, 2013) by increasing active engagement, constructivist learning; contextual, empathetic experiences with added layers of rich data and feedback. This study explored and compared the effectiveness of Extended Reality (XR) as a pedagogical tool using two modalities; XR based interactive environment using Oculus rift and traditional image- text based information delivery method. Outcomes of this study suggested that selection of different type of instructional technologies and methods affect how effectively learners construct meaning, reflect from experience and use provided information.

References

1. Atkinson, E. S. (2004). A comparison of the relationship between creativity, learning style preference and achievement at GCSE and degree level in the context of design and technology project work.
2. Bailenson, J. N., Yee, N., Blascovich, J., Beall, A. C., Lundblad, N., & Jin, M. (2008). The use of immersive virtual reality in the learning sciences: Digital transformations of teachers, students, and social context. *The Journal of the Learning Sciences*, 17(1), 102-141.
3. Gee, J. P. (2009). Deep learning properties of good digital games: how far can they go? In *Serious Games* (pp. 89-104): Routledge.
4. Gül, L. F., Gu, N., & Williams, A. (2008). Virtual worlds as a constructivist learning platform: evaluations of 3D virtual worlds on design teaching and learning. *Journal of Information Technology in Construction (ITcon)*, 13(36), 578-593.
5. Tsai, K. C., & Shirley, M. (2013). Exploratory examination of relationships between learning styles and creative thinking in math students. *International Journal of Academic Research in Business and Social Sciences*, 3(8), 506.

ADA Accessible Design Standards in Higher Education Indoor Environments

Nickole Henke, Elizabeth Pober, Suchismita Bhattacharjee and Tracy Howard
University of Oklahoma
Norman, OK

The Americans with Disabilities Act (ADA) is one of the most influential civil rights acts that prohibits the discrimination of persons with disabilities. Throughout history persons with disabilities have experienced discrimination, exclusion, and segregation, therefore, the ADA has provided disabled individuals the opportunity to become active and contributing members of today's society (Henderson, & Bryan, 2011). Higher education institutions have experienced an increase in the enrollment of students with physical disabilities as a result of ADA policy and accessible design standards; therefore, colleges and universities encounter an increase of wheelchair users on campus (Paul, 1999). Despite the implementation of accessible design standards wheelchair users and other mobility device users continue to experience environmental barriers within higher education indoor environments. Environmental barriers within higher education environments prevent students using mobility devices from accessing campus building areas or exhibit some level of physical difficulty when accessing such areas. Therefore, environmental barriers can either deny or limit the participation of mobility device users on campus. The purpose of this study was to identify the relationship between accessible design standards and environmental barriers within higher education indoor environments. This study introduces the accessibility gap which describes the lack of cohesion between design standards and current views of accessibility when using or assisting with a mobility device. The two-part research methodology includes an online survey and field measurements from the selected study area consisting of several campus buildings from a U.S. State University. An online survey was used to collect data from mobility device users and persons who assisted mobility device users' regarding their perceptions on accessibility within the three major building areas of the selected study areas; 1) exterior accessible entrances, 2) accessible routes, and 3) toilet rooms. The survey was designed to determine if building areas were perceived as an environmental barrier or facilitator based on the survey responses. If respondents identified a building area as an environmental barrier then they were asked to select design factors contributing to their response. Following the qualitative data analysis, the identified design factors associated with a building area viewed as an environmental barrier were measured within the selected campus buildings. Field measurements were compared to the applicable accessible design standards and then used to determine the overall adherence level of campus buildings regarding design standards. The

analysis of quantitative data carefully examines the relationship between field measurements and a campus building's adherence to accessible design standards within the three major building areas. Results indicated that some participants perceive some current accessible design standards as environmental barriers and identified the need for implementation of additional design standards. Some environmental barriers indicated that field measurements adhere to the applicable design standards which suggests that minimum design standards need to be enhanced. Finally, the study findings introduce future research needs to further investigate specific building areas where there are no current design standards required which wheelchair users view as environmental barriers.

References

1. Department of Justice. (September 15, 2010). "2010 ADA standards for accessible design." United States Department of Justice Civil Rights Division. Retrieved May 20, 2019, from https://www.ada.gov/reg
2. Henderson, G., & Bryan, W. V. (2011). *Psychosocial aspects of disability* (4th ed.. ed.). Springfield, Ill.: Springfield, Ill. : Charles C. Thomas.
3. Paul, S. (1999). Students with disabilities in post-secondary education: the perspectives of wheelchair users. *Occupational Therapy International*, 6(2), 90-109. doi:10.1002/oti.91

Abstract Images:

Figure 1. Exterior accessible entrances. Adapted from 'ADA checklist of existing facilities,' by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

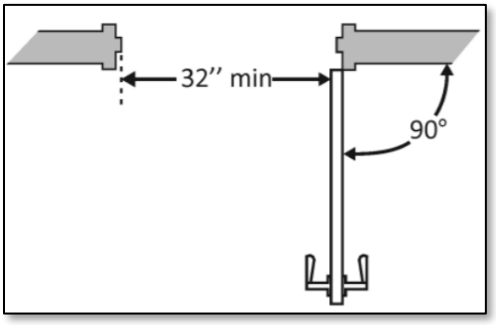


Figure 2. Exterior accessible entrances – Door or doorway width. Adapted from 'ADA checklist of existing facilities,' by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

Figure 3. Campus building exterior accessible entrance – Door width. April 11, 2019.

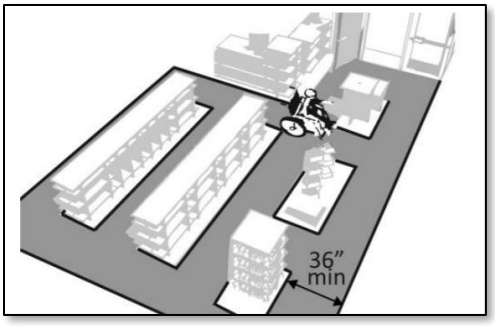


Figure 4. Accessible routes. Adapted from ‘ADA checklist of existing facilities,’ by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

Figure 5. Accessible routes – Pathway width. Adapted from ‘ADA checklist of existing facilities,’ by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

Figure 6. Campus building accessible route – Pathway width. April 11, 2019.

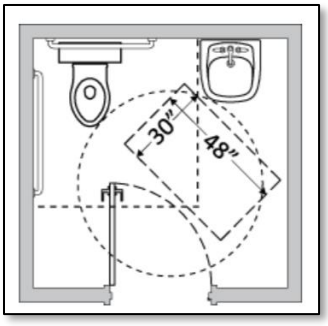


Figure 7. Toilet rooms. Adapted from 'ADA checklist of existing facilities,' by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

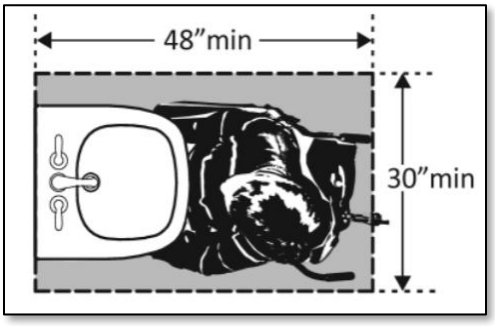


Figure 8. Toilet rooms – Floor approach space. Adapted from 'ADA checklist of existing facilities,' by Institute for Human Centered Design and ADA National Network. Copyright 2016 by the ADA Checklist for Existing Materials.

Figure 9. Campus building toilet room – Floor approach space. April 11, 2019.

Designing for Generalized Anxiety Disorder: Interior Design Considerations and Guidelines for Future Research

Ashley Marino
Texas Tech University
Lubbock, TX

Anxiety disorders are the most common mental health disorders in the US, affecting about 18.1% of the population every year; this statistic includes the 6.8 million adults living with Generalized Anxiety Disorder (GAD) ("Facts & Statistics | Anxiety and Depression Association of America, ADAA," n.d.). GAD is at its core is about uncontrollable worry (Hallion, Tolin, Assaf, Goethe, & Diefenbach, 2017). Because GAD is a disorder that weans and grows in severity over the lifetime, implementing mild interventions in the spaces that an individual uses the most can have a positive effect on quality of life. In 2017, 43% of Americans reported that they spent at least some time working remotely (Chokshi, 2018). For individuals with GAD, concentration and productivity may be compromised if one's home office space isn't designed around their individual needs. Based on a review of relevant literature, the proposed office concept takes into consideration 8 design principles inspired by Ingrid Gehl's Living Environment Framework (Peters, 2016). Research shows that interior design features have an impact on the way an individual thinks; by optimizing a space to soothe symptoms of GAD, inspire focused attention, and reduce stress-inducing behaviors, designers can create more inclusive holistic spaces.

References

1. Hallion, L. S., Tolin, D. F., Assaf, M., Goethe, J., & Diefenbach, G. J. (2017). Cognitive control in generalized anxiety disorder: relation of inhibition impairments to worry and anxiety severity. *Cognitive Therapy and Research*, 41(4), 610-618.
2. Peters, T. (2016). Social sustainability in context: rediscovering Ingrid Gehl's Bo-miljø. arq: *Architectural Research Quarterly*, 20(4), 371-380.

Indoor finish material influence on contamination, transmission, and eradication of methicillin-resistant Staphylococcus aureus (MRSA)

Debra Harris, Keyanna Taylor and Katie Napierkowski
Baylor University
Waco, TX

The CDC has made the elimination of HAIs a top priority and has experienced some success, reporting a reduction of 23% in 2014. However, success in the reduction of CDI and MRSA rates remain elusive, with a combined reduction rate of 5%. The contribution of environmental surface contamination in healthcare environments as a factor impacting HAI rates remains unresolved. This study systematically evaluated environmental surfaces used in healthcare environments for material efficacy in MRSA to survival, and disinfection effectiveness. The following aims were the scope of the study: Aim 1: Determined the length of time MRSA survives on environmental surface materials in a controlled environment Challenge: MRSA and other known pathogens in healthcare facilities have been found to live on environmental surfaces from a few hours up to five months. Approach: Prepared samples to simulate contamination and tested over time for MRSA survival. Impact: Verification of survival rates inform future studies of pathogen contamination of environmental surfaces for controlled and applied research. Aim 2: Evaluated the integrity of environmental surface materials and influence on the contamination level of MRSA Challenge: Determine the material composition and properties that contribute to the integrity of environmental surface materials over time, using new and simulated worn materials. Approach: New and worn environmental surfaces were compared for differences in physical integrity. Impact: Understanding the changes that occur in environmental surface materials contribute to a better understanding of material integrity and potential for differences in surface contamination. Aim 3: Assessed effectiveness of manufacturers' recommended cleaning and disinfecting processes for environmental surface materials in healthcare facilities and laboratories Challenge: Established a protocol to verify the effectiveness of recommended cleaning and disinfecting of surface materials. Approach: One set of test samples will be inoculated and tested for verification of contamination, then disinfected per recommended standards and tested for comparative analysis. Impact: Benchmarking cleaning and disinfecting efficacy on new and worn materials contribute to a better understanding of challenges for environmental services and validated a method that can be used in future research to study to novel cleaning process and technologies. Aim 4: Assessed effectiveness of a novel cleaning and disinfecting product using recommended cleaning and disinfecting processes for environmental surface materials in healthcare facilities and laboratories

Challenge: Established a protocol to verify the effectiveness of a novel cleaning process and technology of surface materials. Approach: One set of test samples were inoculated and tested for verification of contamination, then disinfected per novel technology recommended methods (foam, spray, or wipe) and tested for comparative analysis. Impact: Benchmarking novel cleaning and disinfecting efficacy on new and worn materials validated a method and novel disinfecting technology that can be used in future research to investigate innovative cleaning processes and technologies for ease of use, efficiency and effectiveness.

References

1. Beard-Pegler, M. A., Stubbs, E., & Vickery, A. M. (1988). Observations on the resistance to drying of staphylococcal strains. *Journal of medical microbiology*, 26(4), 251-255.
2. Bissett, L. (2006). Reducing the risk of acquiring antimicrobial-resistant bacteria. *British journal of nursing*, 15(2), 68-71.
3. Boyce, J. M. (2007). Environmental contamination makes an important contribution to hospital infection. *Journal of hospital infection*, 65, 50-54.
4. Carling, P. C. (2008). Evaluating the thoroughness of environmental cleaning in hospitals. *Journal of Hospital Infection*, 68(3), 273-274.
5. Lankford, M. G., Collins, S., Youngberg, L., Rooney, D. M., Warren, J. R., & Noskin, G. A. (2006). Assessment of materials commonly utilized in health care: implications for bacterial survival and transmission. *American journal of infection control*, 34(5), 258-263.

Interactive, project-based learning: A strategy for instructing and engaging Generation Z in design education

Judy Ruvuna
University of The Incarnate Work
San Antonio, TX

Although generational traits have always affected classrooms, the advent of quickly changing technology and a generation of students who grew up among the internet of things have added more challenges to responding to learning needs. Past norms of 'shifting with the times' are now 'running to catch up.' In response to this phenomenon, communication strategies for Generation Z are paramount. This poster describes generational traits and preferences of Generation Z using project-based learning along the timeline of a design project, showcasing project parameters, and presenting an educational approach to student needs. Some characteristics of Generation Z, according to Schwinger and Ladwig (2018) are that they are entrepreneurial, self-sufficient, tenacious, skill-focused, online, and personal. Miller (2018) states that they are conversely connected by technology and yet crave personal interaction, embracing change and seeking a voice. Some of the challenges we face as educators lie in the traditional "Sage on Stage" approach elucidated by Morrison (2014) which no longer reaches this generation. Lectures are less effective, traditional research methods are eschewed for quick internet searches and common performance metrics take a back seat to immediate feedback. Project-based learning approaches these challenges with the practice of doing/making, activating muscle memory rather than relying on rote memorization. It provides the backdrop for instructor and student interaction and inserts real-world application into the classroom. The project creates an atmosphere of guidance rather than top-down instruction, giving students opportunities to find their voice and often to learn in failure as much as achievement. This poster highlights an approach to the design education of Generation Z, utilizing the project as a teaching and communication tool. In line with the preferences of Generation Z, it will take many different avenues to reach this cohort, and our collective knowledge and collaboration as educators is tantamount to our success.

References

1. Miller, J. (2018). 10 Things You Need to Know about Gen Z. HR Magazine, 63(7), 50–56. Retrieved from http://search.ebscohost.com.ezproxy.lib.vt.edu/login.aspx?direct=true&db=bth&AN=133041652&scope=site

2. Morrison, C. D. (2014). From ‘sage on the stage’to ‘guide on the side’: A good start. *International Journal for the scholarship of teaching and learning*, 8(1).
3. Schwieger, D., & Ladwig, C. (2018). Reaching and retaining the next generation: Adapting to the expectations of Gen Z in the classroom. *Information Systems Education Journal*, 16(3), 45.

Smart Home Technologies for Aging in Place Home

Kelsey Mullins, Suchismita Bhattacharjee and Tracy Howard
University of Oklahoma
Norman, OK

With the increase in the number of baby boomers getting older, there is a significant growth in the need for accessible housing. A recent survey conducted by AARP (American Associate of Retired Persons) identified that 73 percent of individuals aged 45 and older would like to stay in their current residences as long as possible, and 77 percent would like to stay in their communities as long as possible (Farber et. al 2011). Several smart home technologies are available today that can monitor the home for safety and wellbeing, also make it more accessible. These technologies target older adults, people with disabilities or the general population as needed. As stated by Demiris & Hensel (2008) “A “smart home” is a residence wired with technology features that monitor the well-being and activities of their residents to improve overall quality of life, increase independence and prevent emergencies.” The purpose of this study is to find how technology can be implemented in homes that are being built for aging in place (AIP). Through this study a survey will be sent out to find how many homeowners, builders, and designers are using technology in homes to assist the homeowners who are planning on aging in place in their home. The survey will also find out what type of technology they will be using in their home too. The collected data from the survey will be analyzed using affinity diagram method to create a comprehensive list of smart home technologies that are currently being installed in AIP homes. This data will be further used to create a database of smart home technologies for AIP homes. This database is expected to be a very useful tool for Interior Designers, to make an educated decision regarding AIP homes.

References

1. Farber, N., Shinkle, D., Lynott, J., Fox-Grage, W., & Harrell, R. (2011). Aging in place: A state survey of livability policies and practices.
2. Demiris, G., & Hensel, B. K. (2008). Technologies for an aging society: a systematic review of “smart home” applications. *Yearbook of medical informatics*, 17(01), 33-40.

Accessorizing Space: Sculptural Awnings

Torrey Tracy and David Baird
University of Arkansas
Fayetteville, AR

A sculptural necklace; an elegant timepiece; a sentimental ring; or a one-of-a-kind vintage set of cuff links-these accessories, among numerous others, can greatly pronounce and elevate the human appearance while making a commanding statement far beyond their small-scale. How can one accessorize a structure or a space? It was the ambition of the designers to try simply that by exploring a series of sculptural awnings that adorn or engage an otherwise lackluster structure or environment. The dimensions of the awnings align with conventional thresholds as well as possessing an appreciation for the human scale. While signifying a formal entrance to a space and creating a micro environment, the awnings aim to reinforce a natural connection by capturing and creatively delivering rainwater to an integrated, or intimately connected planter. The awnings constructed from strategic cuts, scores, and folds in sheet steel, have no choice but to weather elegantly. Lastly, the monolithic approach of the construction allows for a pure and believable celebration of form and function.

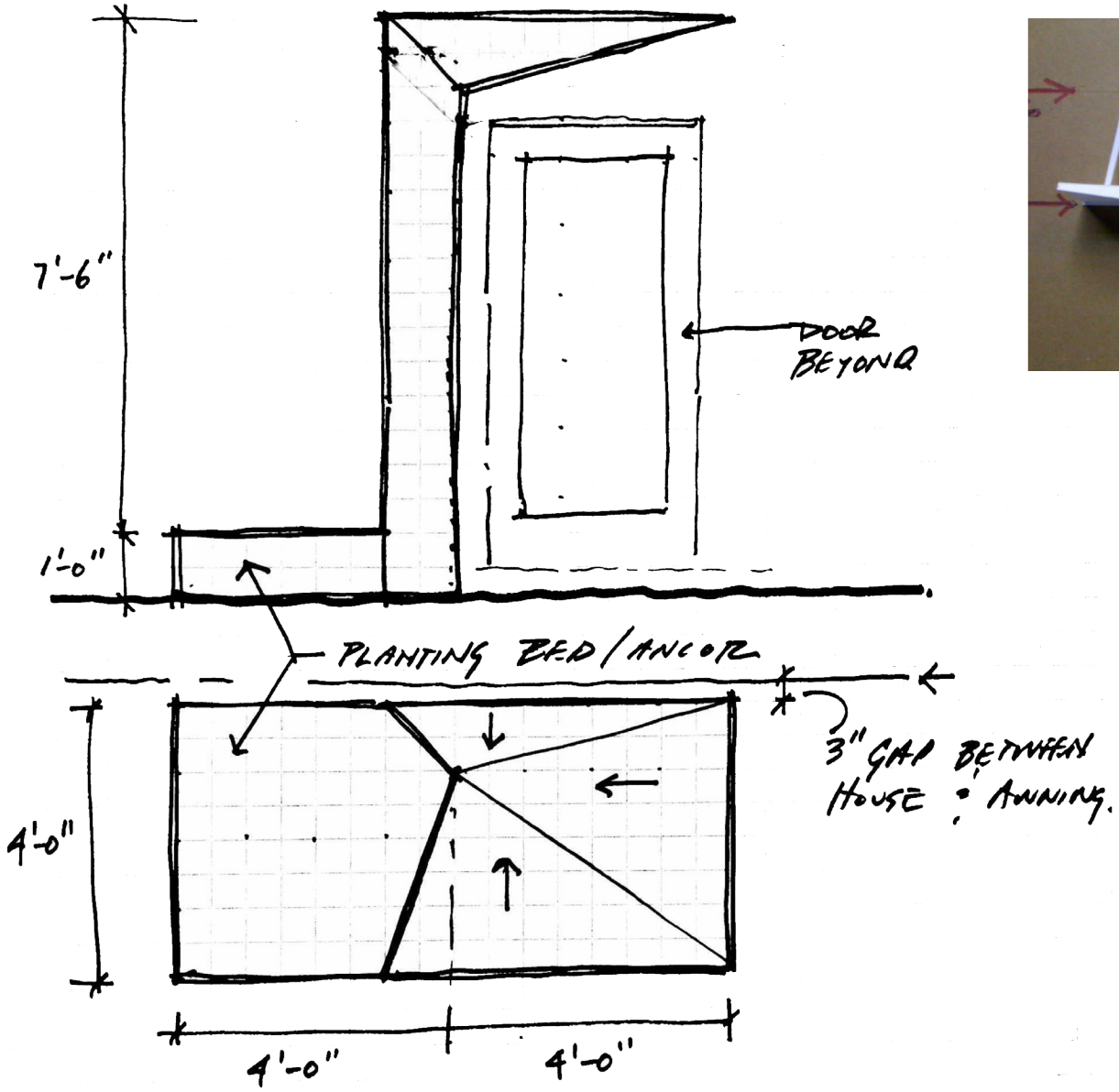
accessorizing Space: sculptural Awnings

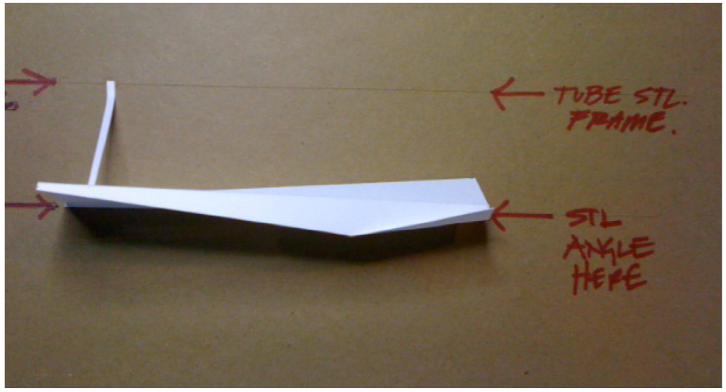
image courtesy of designers

image courtesy of: www.pinterest.com/pin/494833077782204250/?lp=true

image courtesy of: www.pinterest.com/pin/318629742372850302/

inspiration: creating an accessory



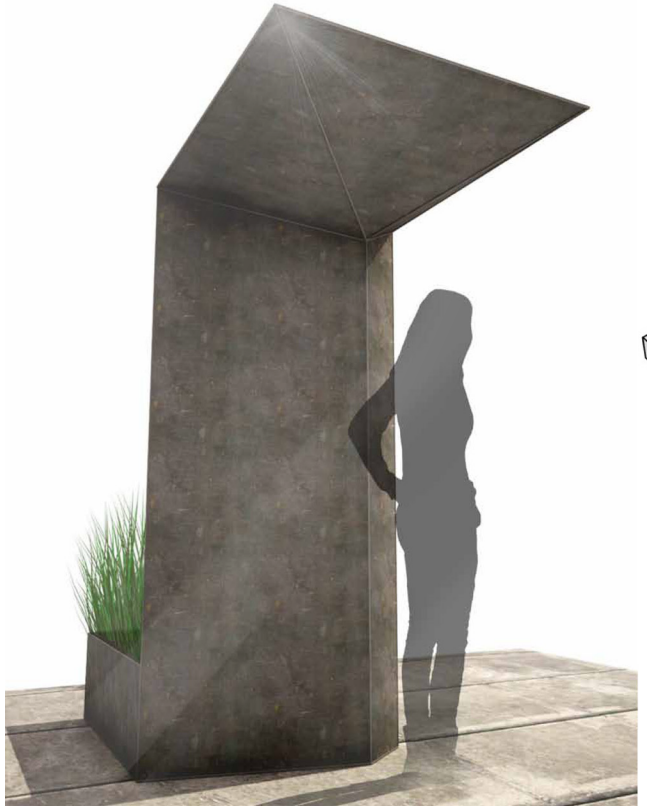


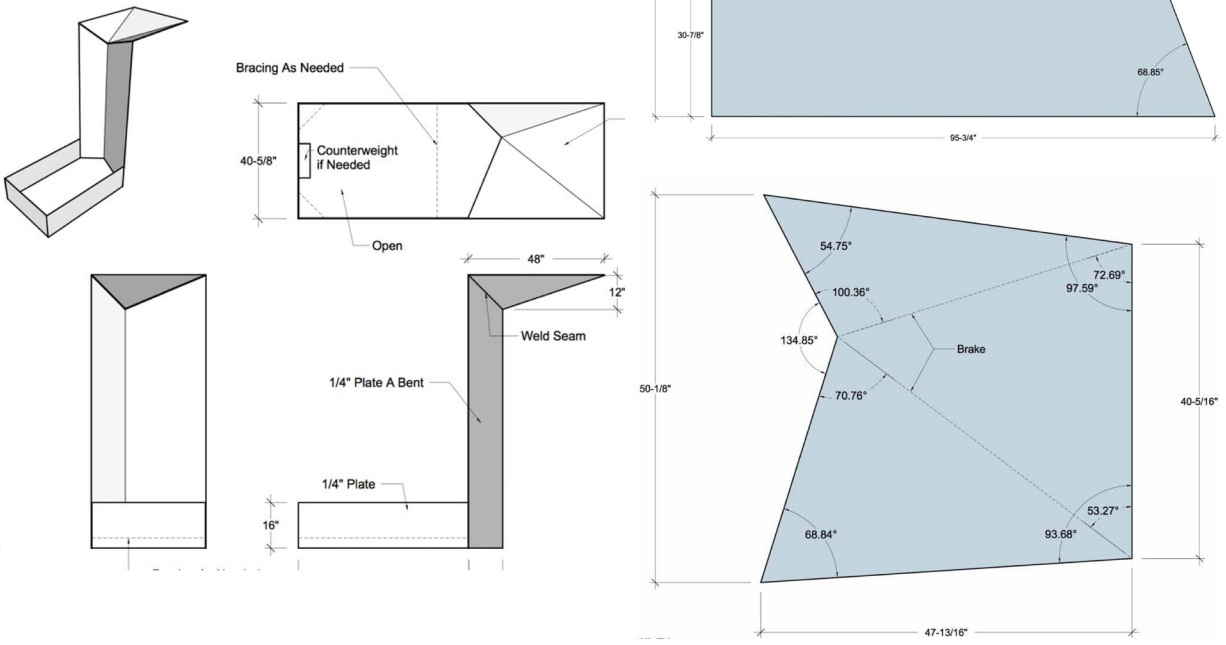
images courtesy of designers

process & exploration

images courtesy of designers

iteration and solar studies





construction drawings
images courtesy of designers

constructed awning- Bainbridge Island, WA
images courtesy of designers

built form 1

constructed awning- Houston, TX
images courtesy of designers

built form 2

Cruising at a Higher Altitude-The Generation Z Inspired Redesign of the Las Vegas McCarran Airport Interactive Exhibit at the Discovery Children's Museum

Torrey Tracy and Doug Walton
University of Arkansas
Fayetteville, AR

The presence of a children's museum in Las Vegas, NV has been around in some form or fashion since 1984; however, a uniquely branded DISCOVERY Children's Museum established a formal educational permanence within the city's fabric after opening to an inquisitive public in 2013. The museum is home to nine-themed exhibition halls spread over 26,000 square feet of interactive hands-on core exhibits. As an anchor to Las Vegas's downtown Symphony Park, its location is an easily accessible family-oriented and energetic educational destination that offers visitors extraordinary learning experiences. Since its arrival, the museum has been consistently recognized for award-winning exhibits and has developed into a critical community asset that complements and enhances the educational experience of the children living in Southern Nevada. Recently, the Business and Development Department at Las Vegas' McCarran International Airport concluded that their current interactive airport exhibit, i.e., their representation within the museum, is struggling to keep young visitors as equally engaged as some of the other more digitally forward exhibits. With its dated and lackluster low-tech presence, the International Airport themed exhibit is set within numerous other more dynamic thematic exhibits that make up the fictitious "ECO City"-a metropolitan, environmentally friendly city that aims to address how people live and work together in their community. Working under the guidance of a Las Vegas architectural and interior design firm, the designer consulted on the research and development of innovative, technological engagement within the existing exhibition space. As with most public works projects, especially ones that have a charitable, non-revenue generating program, the budget was a vital concern. Avoiding structural intervention for a more streamlined project turn-around was also a prerequisite. Understanding the target demographic was key to the research and subsequent schematic design proposal. The DISCOVERY Children's museum attracts the youngest of the Generation Z cohort-a population born between 1996 and 2014. This generation is most technologically advanced as they have never seen the world without the internet. Digital media is their fundamental learning tool, and this strongly permeates into their learning and understanding--the group has developed an elevated level of independence, self-confidence, and autonomy over their surroundings. In addition, Generation Z has no memory of a pre-9/11 world in which acts of terrorism radically changed the industry of air travel. Because of such

unawareness and naivety, a renewed level of romance, innocence, and prosperity in international travel can be realized. In a low-tech approach to the design development of the new interactive exhibit, iteration through Photoshop overlays and scaled collaging over existing site photos was implemented . The approved design resulted in a healthy balance between age-appropriate interactive digital exhibits, authentic aviation themed artifacts, and analog haptic exercises that celebrate air travel and technology, sustainability, and the history and culture of Las Vegas . This presentation will follow the development of an age- and technologically-appropriate solution, highlighting key steps in the design solution and highlighting accommodation for young digital natives.

DISCOVERY Children's Museum- Las Vegas, NV

image courtesy of :www.daytrippen.com/wp-content/uploads/2017/06/discvoery-museum-las-vegas.jpg

Interactive Exhibit/ Educational Opportunity

image courtesy of :www.tripadvisor.in/DISCOVERY_-Children_s_Museum-Las_Vegas_Nevada.html

Interactive Exhibit

image courtesy of :en.redsearch.org/images/21172634#images-19

discovery children's **MUSEUM**

existing airport **EXHIBIT**

(photos courtesy of designer)

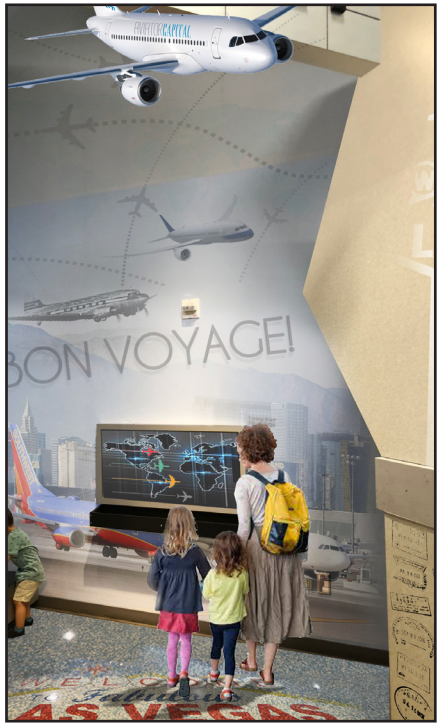
MaCarran International Airport Interior

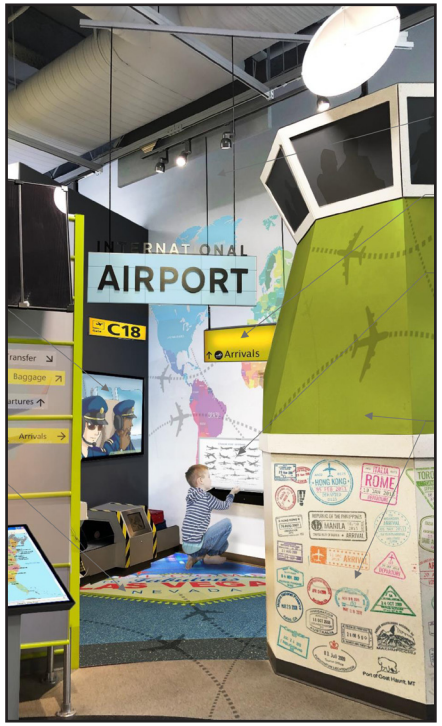
Image courtesy of: cytopathology.conferenceseries.com/2016/venue-hospitality

MaCarran International Airport Interior

image courtesy of :depositphotos.com/108303820/-

inspiration & PRECEDENCE





*adobe photoshop on existing site photos

iteration & PROCESS*

(photos courtesy of designer)

- over scaled airplane fuselage model suspended from ceiling
- McCarran International Airport airline logos and airport theme graphics; iconic "Welcome to Las Vegas" signage on floor
- tactile sustainable materials board; airport theme cartoon on loop; digital interactive map
- analog paper airplane stand with folding instruction decal on existing control tower
- perforated metal Las Vegas skyline panel on existing control tower
- interactive radios and aerial graphics with re-purposed aircraft cockpit seats and console in existing control tower

design INTENT

(photos courtesy of designer)

A Area Location on Second Level
1/16" = 1'-0"

GENERAL SHEET NOTES

1. ALL EXISTING STRUCTURE AND ELEMENTS TO REMAIN AS BUILT
2. ARTISTS/ INSTALLERS TO FIELD VERIFY ALL DIMENSIONS AND PROPERLY PREPARE WALLS FOR INSTALLATIONS
3. FIELD VERIFY ALL RELEVANT DOORS AND WINDOW ROUGH OPENINGS.

KEY NOTES

1. EXISTING CONTROL TOWER AND SURROUNDING DELINEATING STRUCTURE-TO REMAIN AS BUILT
2. CUSTOM PERFORATED METAL LAS VEGAS CITY SCAPE SIGN TO WRAP TOWER-OFFSET 1" FROM TOWER; SEE DETAIL 11/ A1.00 FOR DESIGN INTENT; REFER TO ARTISTS' SHOP DRAWINGS FOR FINAL ITERATION
3. MIRROR FINISH AT TOP OF EXISTING TOWER
4. BAGGAGE SCREENING DISPLAY TO REMAIN
5. DIGITAL INTERACTIVE MILEAGE / DISTANCE MAP
6. MONITOR WITH AIRPORT-THEME CARTOON ON RECCURRING LOOP
7. REPLICA INTERIOR "COCKPIT" WITH HEADPHONES OFFERING LOOP SOUNDBITES OF CONTROL TOWER CONVERSATION; SEE DESIGN INTENT IMAGE AND SHOP DRAWINGS
8. AIRCRAFT COCKPIT CHAIRS; SEE DETAIL 12/ A1.00 FOR DESIGN INTENT
9. LARGE LIGHT-WEIGHT PHYSICAL MODEL OF AIRPLANE SUSPENDED FROM CEILING; REFER FOR MODEL SHOP DESIGN DRAWINGS FOR INSTALLATION FROM CEILING
10. VEGAS INSPIRED SIGNAGE SUSPENDED FROM MODEL FUSELAGE; SEE DETAIL 13/ A1.00 FOR DESIGN INTENT
11. TABLE FOR PAPER FOR PAPER AIRPLANE STATION
12. 2' x 2' ALUMINUM WALL TILE
13. TOUCH BOARD DISPLAYING "GREEN" MATERIALS EMPLOYED IN AIRPORT CONSTRUCTION
14. SPEAKERS

FINISH LEGEND - VERIFY W/ OWNER

FLOORING
FD-1 LAS VEGAS BLVD SIGN DECAL ON FLOOR SURFACE TO MATCH EXISTING IN McCARRAN INTERNATIONAL AIRPORT

WALL PAINT
PT-1 WHITE BASE COLOR UNDERLAY FOR WALL GRAPHICS (AS RECOMMENDED BY ARTISTS/ WALL GRAPHIC INSTALLERS)

WALL GRAPHICS- DECALS (DL)
INTERIOR CONTROL TOWER:
DL-1: START AT TOP OF CUSTOM COUNTER TO TAPER IN WALL; SEE DETAIL 14/ A1.00 FOR DESIGN INTENT
DL-2: START AT BASE OF INTERIOR OF TOWER TO WRAP INTERIOR UNDER DL-1 WITH INCREASING TRANSPARENCY TOWARDS TOP OF TOWER; COORDINATE WITH ARCHITECT FOR APPLICATION; SEE DETAIL 15/ A1.00 FOR DESIGN INTENT

EXTERIOR TOWER:
DL-3: WRAP ON EXTERIOR AT ENTRY HALF-DECAL TO FEATURE INSTRUCTIONS FOR CREATING PAPER AIRPLANES
DL-2: EXTERIOR WITH INCREASING TRANSPARENCY

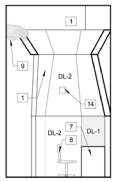
INTERIOR SPACE:
DL-4: WRAP ON UPPER PORTION OF INTERIOR SPACE TO COVER ENTIRE INTERIOR AREA AND INCLUDE PORTION OF ENTRY WALL; DECAL TO LIST AIRLINES AT LAS VEGAS AIRPORT; SEE DETAIL 17/ A1.00 FOR DESIGN INTENT

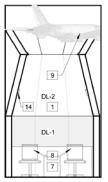
DL-5: DECAL TO START AT BASE AND INCREASE IN TRANSPARENCY UNTIL COMPLETELY GONE AT MID POINT; COORDINATE WITH ARCHITECT FOR APPLICATION; SEE DETAIL 18/ A1.00 FOR DESIGN INTENT

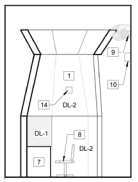
ENTRY WALL:
BRUSHED ALUMINUM WALL TILE AT ENTRY WALL

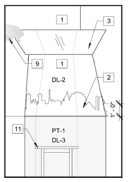
CEILING
FINISH AS IS

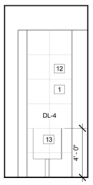
MILLWORK
CUSTOM COCKPIT IN CONTROL TOWER; SEE SHOP DRAWINGS

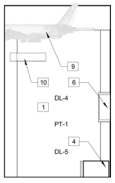

1 Interior Tower View 1
1/4" = 1'-0"

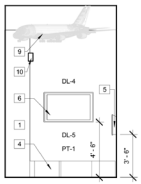

2 Interior Tower View 2
1/4" = 1'-0"

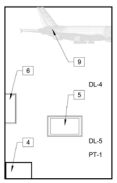

3 Interior Tower View 3
1/4" = 1'-0"

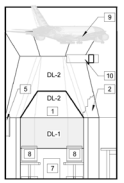

4 Entry 1
1/4" = 1'-0"

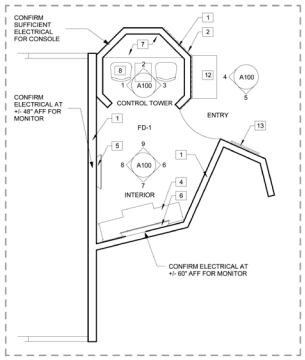

5 Entry 2
1/4" = 1'-0"


6 Interior 1
1/4" = 1'-0"

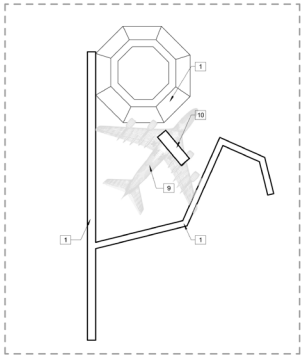

7 Interior 2
1/4" = 1'-0"


8 Interior 3
1/4" = 1'-0"

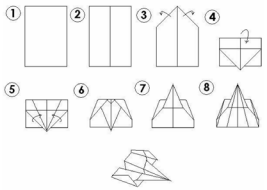

9 Interior 4
1/4" = 1'-0"

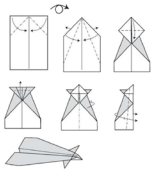


B Area Plan
1/4" = 1'-0"



C RCP
1/4" = 1'-0"


16 DL-3 Paper Airplane


19 DL-3 Paper Airplane 2

15 DL-2 Sky Image

Design Intent

Design Intent Control Tower

Typical Individual Graphics at Entry

13 Vegas Sign

10 FD-1 Floor Decal

11 LV Metal Sign

Control Tower Chair-Keyed Note 12

Materials Touch Board-Keyed Note 13

14 DL-1 Control Tower Image

17 DL-4 Airlines

18 DL-5 Interior Decal

construction DOCUMENTATION
Single sheet construction document (provided by designer)

A.100

DEPARTMENT OF AVIATION
CLARK COUNTY NEVADA

LAS VEGAS McCARRAN INTERNATIONAL AIRPORT
CLARK COUNTY NEVADA

Sheet Title
DISCOVERY CHILDREN'S MUSEUM-INTERNATIONAL AIRPORT EXHIBIT
CCDOA Project No. (NO)
Project

Consultant
Stamp
Description
Date
CCDOA Project No.
Date
Drawing Number

Jack Lenor Larsen at 90: Transformations by a Textile Innovator

Stephanie Zollinger
University of Minnesota
Minneapolis, MN

Jack Lenor Larsen, a major influence in textiles and interior design profession in the 20th century, has been the subject of several museum exhibitions. However, the exhibition Jack Lenor Larsen at 90: Transformations by a Textile Innovator presented at a Midwest Museum revealed the work of this master from a new perspective, one that even Larsen himself found innovative. During a visit to the exhibition, he remarked: “The exhibition is unique. It is the first time a display of my work has not been organized chronologically.” Larsen founded Jack Lenor Larsen Incorporated in 1952, and it became one of the world’s leading textile producers, specializing in fabrics for interiors. Jack Lenor Larsen at 90 focused on the major innovations of Larsen’s long and storied career: printed velvets, fold dyes, batik velvets, double cloths, ikats, warp printing, warp-faced leno weaves, stretch fabric, and the Terra Nova collection. Each of these innovations was introduced through a didactic panel that contained an explanation of the concept, the innovation that Larsen brought to it, and explanatory illustrations. The panels provided the framework for rich visual displays of actual Larsen textiles from the Museum’s collection supplemented with a few loans. The primary goal of the exhibition was to introduce guests to the significant areas in which Jack Lenor Larsen influenced and broke new ground in textile craft and industry. Over 60 textiles and other Larsen-designed products were included in the exhibition, supported by related production and marketing materials that illustrated Larsen’s innovative approach to technology, globalization, and corporate branding. The structure of the exhibition allowed guests to understand the depth of the innovative nature of Larsen’s design and business processes - how he worked, what inspired him, and why his designs resonated globally - through contrast with other accepted design practices of the time. Within this exhibition of Larsen’s innovations was a unique hue and tonal chart developed from fabric swatches of numerous different Larsen textile lines. Created from 170 commercial fabric sample cards, the hue/tonal range covered an entire wall near the entrance of the gallery. Combined with the initial didactic panel that presented the concept of the exhibition, this produced a dramatic visual introduction to the theme of innovation. Because the exhibition focused on Larsen’s innovations rather than his chronology, his striking accomplishments were positioned in high relief against a backdrop of the textile industry of the time. Post visit comments revealed that guests to the exhibition understood more clearly the dramatic impact of Larsen’s life and work. The structure of the exhibition -

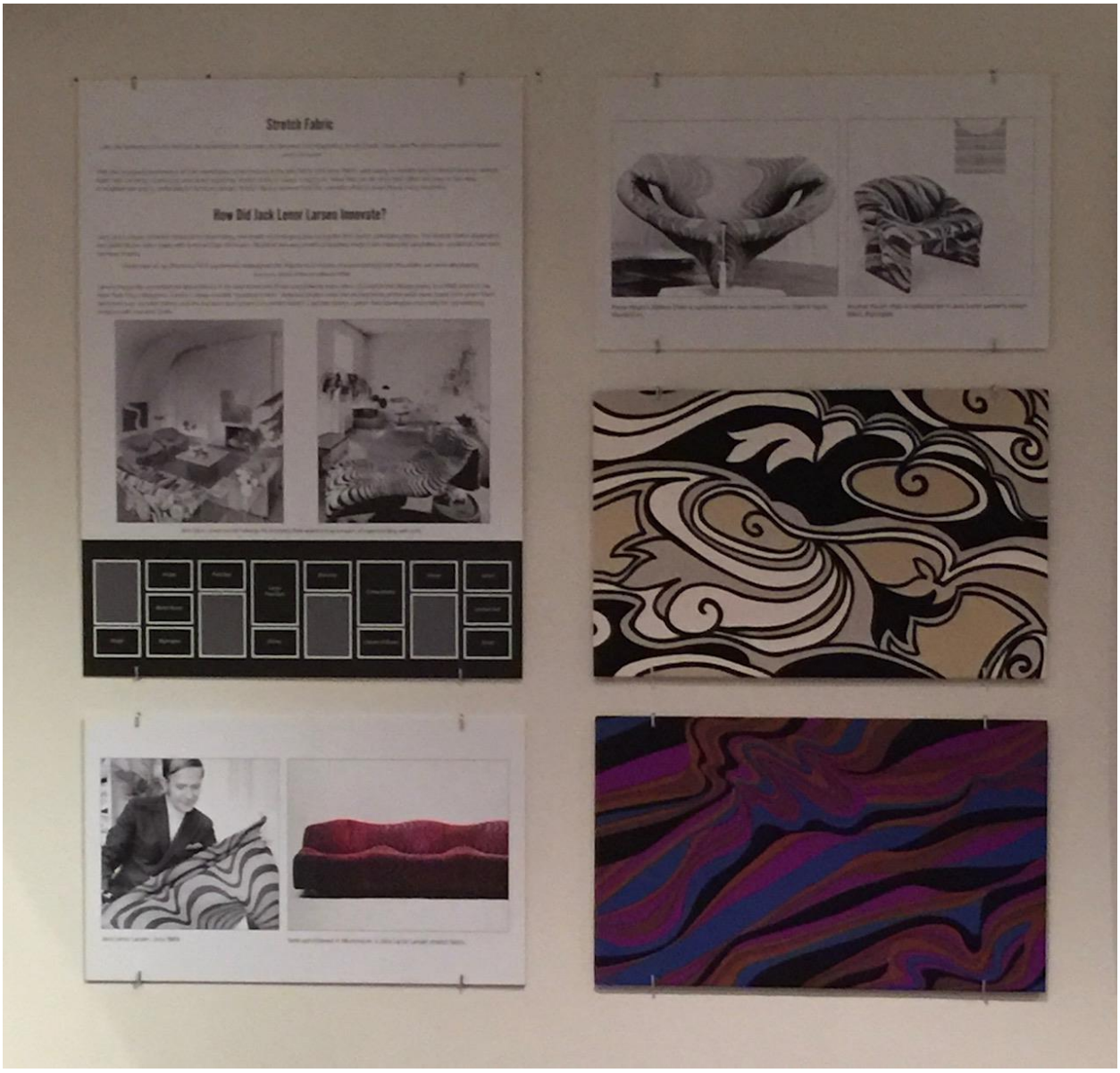
including textual and visual exploration of each theme - built upon the introduction of each topic, creating a rich tapestry of innovation. Larsen took inspiration from world cultures and transformed patterns, colors, materials, and techniques into innovative textiles. As a result, he saw potential in global discovery and collaboration. With Jack Lenor Larsen at 90: Transformations by a Textile Innovator this spirit became the guiding criterion of an exhibition that highlighted 45 years of significant design innovation.

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 1

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 2

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 3

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 4



Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 5

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 6

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 7

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 8

Jack Lenor Larsen at 90: Transformations by a Textile Innovator – Image 9
Exhibition Opening

Jack Lenor Larsen at 90!! He attended the Exhibition Opening

Space Prints: A Workflow

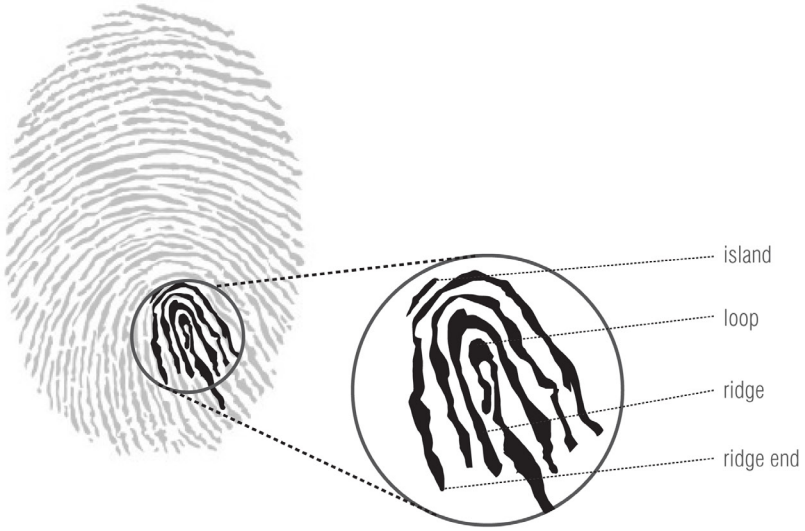
Torrey Tracy
University of Arkansas
Fayetteville, AR

Despite moving in a radically different direction professionally by pursuing a Master of Architecture a few years after having obtained a Bachelor of Arts in Criminology/ Chemistry, the designer still harbors a very deep interest in the field of criminalistics and the social sciences. As an emerging educator, the designer seeks to identify any opportunity to incorporate his past into current pedagogy and practice. In fully embracing interior design as being the most intimately involved with the human scale, the designer enjoys the fabric a human body and space create by their interwoven relationships. He also finds intrigue in the biological individualization that we each possess–striving to reach an elevated level of personalized autonomy over space and structure has been a burning interest of his since committing to a life of professional design and academia. Academically, instruction should be followed by application for true understanding to develop. After much exploration and thought, trial and error, and learning from various pedagogies, the designer devised a series of exercises that play on each other to create a final product that is an equally relevant part of the whole. Space Prints: A Workflow captivates a student audience by promoting the value of composition, instilling a sense of ownership and individual uniqueness to a design outcome, demonstrating the benefit of a strong workflow, and highlighting an imperative individual biological outcome-a space that is a part of us- our fingerprints. Lastly, it resonates strongly with his academic and professional interest in the forensic sciences.

SPACE PRINTS: A WORKFLOW

ONE

Obtaining finger print and exploring analog manipulations/ expressions

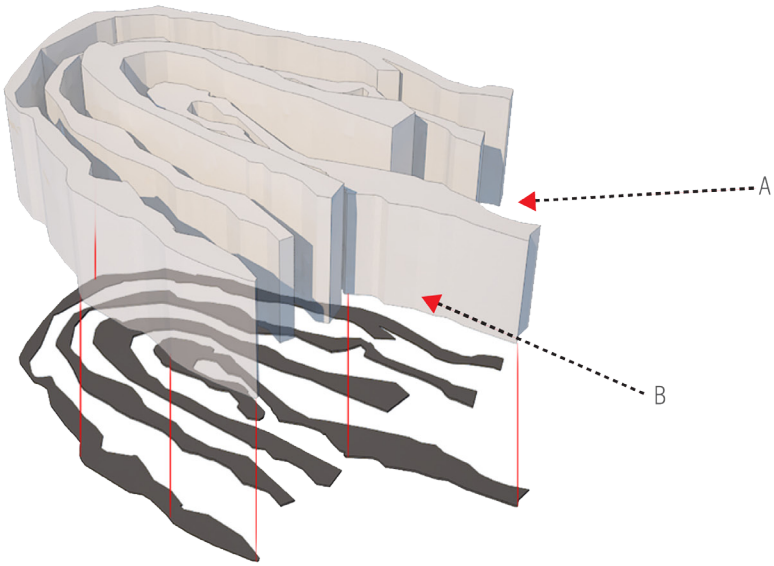


TWO

Analyzing finger print elements for potentially dynamic spatial quality- use of adobe illustrator with scanned finger print underlay to craft linework

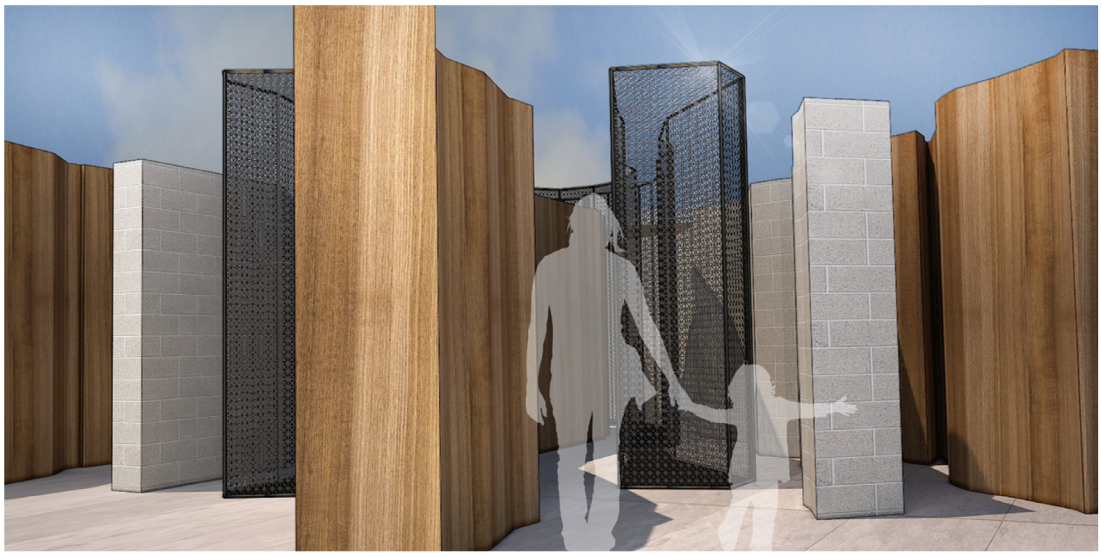
THREE

Exploration of pattern....figure vs ground/ scale/ color/ orientation

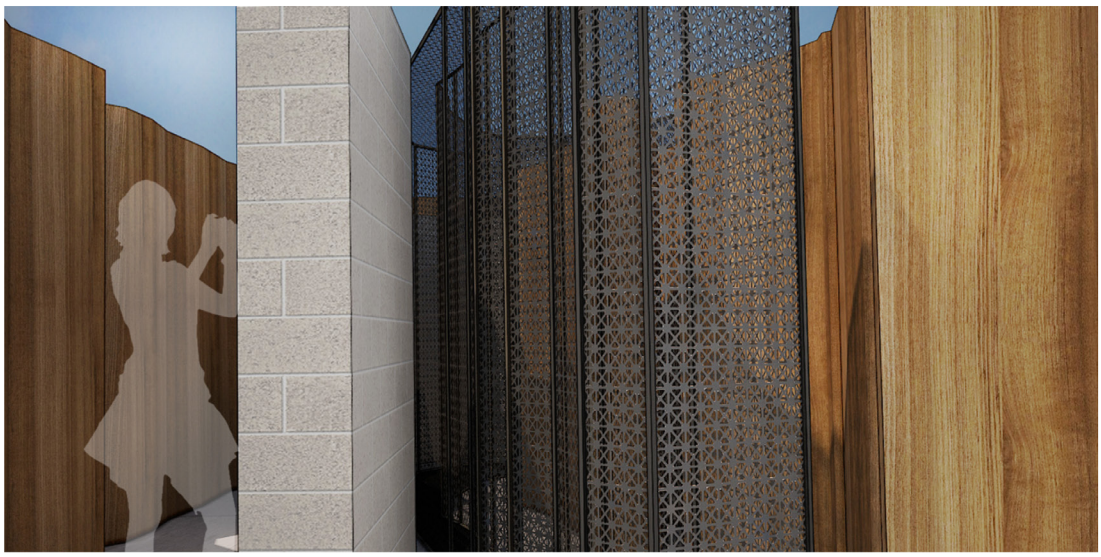


FOUR

Extrusion of finger print portion into 3D space...experimentation with materials and views in 3D Studio Max & Vray



View A



View B

Five

Post-production of renderings in Photoshop