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Peter Greenberg, Wentworth Institute of Technology
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Rachel Pike
Denise Rush, Boston Architectural College
Myoung Joo Chun, Endicott College
Sean Solley, Suffolk University
Ann Gitelman, Suffolk University
Sean Stewarts, Wentworth Institute of Technology

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Joan Dickinson, Radford University

CREATIVE SCHOLARSHIP COORDINATORS
Hessam Ghamari, Appalachian State University

PECHA KUCHA COORDINATOR
Rebecka Radtke

PROCEEDINGS COORDINATOR
Michelle Pearson, Texas Tech University
2018 IDEC CREATIVE SCHOLARSHIP AWARDS

Best in Category - Design as Art
  Felicia Dean – University of North Carolina at Greensboro
  *Racial Identity’s Intuitive Influence on the Creative Process*

Best in Category - Design as Interior
  Jeffrey Day – University of Nebraska
  *FLOCK*

Best in Category - Design as Idea
  Jeffrey Day – University of Nebraska
  *Soft Stones & Stones Table*

2018 IDEC AWARDS OF EXCELLENCE

Best Presentation - Scholarship of Teaching and Learning
  Rana Abudayyeh – The University of Tennessee - Knoxville
  *Living Systems >> Adaptive boundaries*

Best Presentation - Scholarship of Design Research
  Leah Scolere – Colorado State University
  *Pinterest as a collaborative tool: Negotiating participation in the design process*

Best Poster Presentation
  Caroline Matteson – Virginia Commonwealth University
  *Music as a Mediator: Designing a Public Music Library*

Best Graduate Student Presentation
  Lesa Lorusso and Candy Carmel-Gilfilen - University of Florida, Engage Design Lab
  *From STEM to STEAM: An interior design studio as a means for cross-campus interdisciplinary collaboration*

Best Presentation - Member’s Choice
  Rebekah Matheny – The Ohio State University
  *Redefining Retail Design: A Collaborative Approach to Millennial-Centric Solutions*
CONTENTS AT A GLANCE

Creative Scholarship
   Design as Art
   Design as Idea
   Design as Interior

Panels
   Scholarship of Design Research
      Open Track
      Pedagogy
      Social Impact
   Scholarship of Teaching & Learning
      Open Track
      Pedagogy

Posters
   Scholarship of Design Research
      Boundaries
      Culture
      Open Track
      Pedagogy
      Practice
      Social Impact
   Scholarship of Teaching & Learning
      Open Track
      Pedagogy

Presentations
   Scholarship of Design Research
      Boundaries
      Culture
      Open Track
      Pedagogy
      Practice
      Social Impact
   Scholarship of Teaching & Learning
      Boundaries
Culture
Open Track
Pedagogy
Social Impact

Pecha Kucha
Creative Scholarship

Design as Art

**MATERIAL DRAWING NARRATIVE**
John Humphries, Miami University

**72 SEASONS**
John Humphries, Miami University

**RUGA LUMINA: FOLDING INTERIOR SKIN WITH DYNAMIC LIGHT**
Jiangmei Wu, Indiana University

**AVA**
Jeffrey Day, University of Nebraska
E.B. Min, Min Day

**MYTHICAL ARCHITECTURE**
Saral Surakul, The University of Georgia

**A PERSONAL REFLECTION ON RACIAL IDENTITY’S INTUITIVE INFLUENCE ON THE CREATIVE PROCESS**
Felicia Dean, University of North Carolina at Greensboro

**HOME-MADE: TRAVERSING THE INTERIOR LANDSCAPE**
Lois Weinthal, Ryerson University
Andrew Furman, Ryerson University

**CONNECTING: AN INSTALLATION ABOUT STAIRWAYS (AND ESCALATORS OR ELEVATORS)**
Thom Houser, University of Georgia

**PIXELATED HISTORY: AN EXHIBITION OF VIRGINIA ARCHITECTURE**
Roberto Ventura, Virginia Commonwealth University

Design as Idea

**PROJECTED BENCH-MERGING TRADITIONAL CRAFT WITH CNC PROCESSES**
Cory Olsen, University of Arkansas

**SOFT STONES & STONES TABLE**
Jeffrey Day, University of Nebraska
E.B. Min, Min Day

**THE ICONIC AND THE EVERYDAY: CREATIVE FINLAND IN AMERICA**
Peter MackKeith, Fay Jones School of Architecture and Design
Jonathan Boelkinds, Jonathan Boelkins Architect

**THE DISCOVERY HUB: A PLACE TO REST, WORK AND EXPLORE.**
Angela Mckillip, South Dakota State University
Kay Cutler, South Dakota State University
Abby Dyk, South Dakota State University
Maria Swanson, South Dakota State University

**RHYTHMIC SPACE: SOUND REACTIVE PROJECTION MAPPING FOR INTERACTIVE ENVIRONMENTS**
SO-YEON YOON, CORNELL UNIVERSITY
SERENA LEE, CORNELL UNIVERSITY

FINDING FORM
STEPHEN SKORSKI, CENTRAL MICHIGAN UNIVERSITY

FLOWERWALL: LEVERAGING THE AS-BUILT PROTOTYPE MODEL
MATTHEW WAGNER, VIRGINIA TECH

EMBEDEYR: FURNITURE FOR THE CHANGING BOUNDARIES OF THE MODERN OFFICE
AMY JACOBSON-PETERS, UNIVERSITY OF CENTRAL OKLAHOMA

Design as Interior

FLOCK
JEFFREY DAY, UNIVERSITY OF NEBRASKA
E.B. MIN, MIN DAY

Panels

Scholarship of Design Research - Open Track

FRIEND, NOT FOE! RESEARCH, ETHICS, AND THE ROLE OF THE INSTITUTIONAL REVIEW BOARD (IRB) IN TODAY’S INTERIOR DESIGN EDUCATION.

MOIRA GANNON DENSON, MARYMOUNT UNIVERSITY
THEA SCOTT-FUNDLING, MARYMOUNT UNIVERSITY
HESAM GHAMARI, APPALACHIAN STATE UNIVERSITY
JILL PABLE, FLORIDA STATE UNIVERSITY

Scholarship of Design Research - Pedagogy

DESIGNING OUR OWN WAY: RESEARCH METHODS FOR MAKERS

WILLIAM RIEHM, UNIVERSITY OF LOUISIANA AT LAFAYETTE
ANNIE COGGAN, PRATT INSTITUTE
JEAN EDWARDS, UNIVERSITY OF LOUISIANA AT LAFAYETTE
JEAN EDWARDS, UNIVERSITY OF LOUISIANA AT LAFAYETTE
ALEXA WINTON, PRATT INSTITUTE

Scholarship of Design Research - Social Impact

LEVERAGING INTERIOR ARCHITECTURE AND DESIGN’S EXPERTISE TO HELP HURRICANE VICTIMS MOVE FORWARD

TONYA MILLER, UNIVERSITY OF TENNESSEE AT CHATTANOOGA
DANA MOODY, UNIVERSITY OF TENNESSEE AT CHATTANOOGA

Scholarship of Teaching and Learning - Open Track

BEYOND SCREENS, DESIGNING FOR SOCIAL INTERACTION THROUGH DIGITAL TECHNOLOGIES AND EXPERIENTIAL SPACES.

LEAH SCOLERE, COLORADO STATE UNIVERSITY
CLAY ODOM, THE UNIVERSITY OF TEXAS AT AUSTIN
SALEH KALANTARI, UNIVERSITY OF HOUSTON

WHAT IS THE ASSESSMENT METHOD USED TO ADVANCE INTERIOR DESIGN STUDENTS INTO UPPER LEVEL COURSE WORK?
Scholarship of Teaching and Learning - Pedagogy

SO MANY TERMS, SO LITTLE TIME: SEARCHING FOR BEST PRACTICES IN TEACHING INTERIOR DESIGN HISTORY
VALERIE SETTLES, UNIVERSITY OF CENTRAL OKLAHOMA
MELISSA SANTANA, NORTHERN ARIZONA UNIVERSITY
SARAH WILHOIT, HARDING UNIVERSITY

WICKEDNESS, MILLENNIALS AND THE UNDERGRADUATE THESIS: STRATEGIES FOR STRUCTURING INDEPENDENT DESIGN RESEARCH
ROBERTO VENTURA, VIRGINIA COMMONWEALTH UNIVERSITY
HELEN TURNER, UNIVERSITY OF KENTUCKY
SUSIE TIBBITTS, UTAH STATE UNIVERSITY

Posters

Scholarship of Design Research - Boundaries

INVESTIGATING THE IMPACT OF MULTI-SENSORY ENVIRONMENTS ON BEHAVIOR FOR VETERANS WITH DEMENTIA
LESA LORUSSO, UNIVERSITY OF FLORIDA
NAM-KYU PARK, UNIVERSITY OF FLORIDA
SHEILA BOSCH, UNIVERSITY OF FLORIDA

LEARNING SPACES IN HIGHER EDUCATION: SUPPORTING INTERDISCIPLINARY PROBLEM-BASED LEARNING IN AN EMERGING CAMPUS MODEL
MARY JOHNSON, FLORIDA STATE UNIVERSITY DEPARTMENT OF INTERIOR ARCHITECTURE AND DESIGN
MARLO RANSDELL, FLORIDA STATE UNIVERSITY DEPARTMENT OF INTERIOR ARCHITECTURE AND DESIGN

Scholarship of Design Research - Culture

LINKING PUBLIC HEALTH, HERITAGE WORK, AND THE INTERIOR
BRYAN ORTHEL, KANSAS STATE UNIVERSITY

A CASE STUDY OF PLACE ATTACHMENT IN SENIOR COHOUSING COMMUNITIES
GABRIELA PEREIRA, OKLAHOMA STATE UNIVERSITY
MIHYUN KANG, OKLAHOMA STATE UNIVERSITY
MELISSA LIES, OKLAHOMA STATE UNIVERSITY

THE ROLE OF THE SAUDI ARABIAN MOSQUE IN PRESERVING CULTURE AND ENHANCING COMMUNITY CONNECTEDNESS.
AMJAD ALFAWAZ, FLORIDA STATE UNIVERSITY
LISA WAXMAN, FLORIDA STATE UNIVERSITY

REAFFIRMING A SENSE OF PLACE THROUGH LOCAL BRANDING
SARAH WALLSTEDT, FLORIDA STATE UNIVERSITY
KENAN FISHBURNE, FLORIDA STATE UNIVERSITY

Scholarship of Design Research - Open Track
GAME-BASED LEARNING (GBL) APPROACHES AND INSTRUCTIONAL CHALLENGES IN INTERIOR DESIGN STUDIOS
Zina Alaswad, University of Southern Mississippi

THEORETICAL FRAMEWORK IN INTERIOR DESIGN LITERATURE BETWEEN 2006 AND 2016
Suyeon Bae, University of Minnesota
Anjali Bhalodia, Texas State University
Rodney Runyan, Texas State University

UNDERSTANDING LED’S COLOR TEMPERATURE PREFERENCES AMONGST MILLENNIALS AND BABY BOOMERS
Rebekah Matheny, The Ohio State University
Emily Bell, The Ohio State University

PERCEPTIONS OF SENIOR COHOUSING IN CHINA
Yujuan Song, Oregon State University
Seunghae Lee, Oregon State University

ROLE OF THE PHYSICAL ENVIRONMENTS IN SUPPORTING RESIDENTS OF CARE FACILITIES WITH DEMENTIA: A REVIEW OF LITERATURE
Hessam Ghamari, Appalachian State University
Laney Branch, Appalachian State University
Sandra Bernard, Appalachian State University

EVOLUTION OF DEPTH IN ACCESS TO NATURE IN HEALTH CARE ENVIRONMENTS
Sahar Mihandoust, Texas Tech

A CASE STUDY OF TWO OFFICE SPACES IN AUGUSTA, GA
Seda Dazkir, Georgia Southern University
Amy Harmon, Georgia Southern University

IMPROVING THE EXPERIENCE OF VISITING A RETAIL EXHIBITION THROUGH INTERACTIVE, USER-ORIENTED INTERIOR DESIGN
Foroozan Danesh Zand, Art University of Tehran

Scholarship of Design Research - Practice

UNDERSTANDING KNOWLEDGE COLLABORATION: HEALTHCARE MANAGEMENT + INTERIOR DESIGN
Laura Mortland, Southern Illinois University
Robert Rados, Southern Illinois University

BIOPHILIC CLASSROOM DESIGN FEATURES: ANALYSIS OF SPECIAL EDUCATIONAL TEACHERS’ PERCEPTION
Hyunji Song, Florida State University
Jill Pable, Florida State University

ZERO-FALL PATIENT ROOM - AN EVIDENCE-BASED APPROACH TO DESIGNING A HOSPITAL PATIENT ROOM
Saman Jamshidi, Texas Tech University
Homa Pesarakli, Texas Tech University
Debabijoti Pati, Texas Tech University

EXPLORATORY STUDY: HUMAN PERCEPTION TOWARDS COLOR INTEGRATED WITH LIGHT AND MATERIALS
Kyoungmee Kate Byun, University of Louisville
**Scholarship of Design Research - Social Impact**

**CULTIVATING COMMUNITY HEALTH THROUGH AN URBAN GARDEN AND GROCERY STORE.**
Amy Williams, Virginia Commonwealth University
Roberto Ventura, Virginia Commonwealth University

**MUSIC AS A MEDIATOR: DESIGNING A PUBLIC MUSIC LIBRARY**
Caroline Matteson, VCU

**MENTORING FACILITY**
Dara Merritt, Interior Design

**YOU BUILD LIKE A GIRL: GUIDING YOUNG WOMEN BACK TO THE CRAFT AND DESIGN FIELDS**
Sara Hackett, VCU MFA Interior Environments

**INTRODUCTION TO ECOTOURISM IN URBAN ENVIRONMENTS**
Huayu Du, Virginia Commonwealth University

**THE IMPACT OF INDOOR ENVIRONMENTAL QUALITY (IEQ) ON OCCUPANTS’ PERFORMANCE, SATISFACTION, HEALTH AND LEARNING EXPERIENCE IN WORKPLACE AND CLASSROOM BUILDINGS**
Suyeon Bae, University of Minnesota
Abimbola Asijo, University of Minnesota
Caren Martin, University of Minnesota

**IMPROVING THE QUALITY OF LIFE OF LOW-INCOME INDIVIDUALS THROUGH HANDS-ON LEARNING**
Sarah Hathcock, University of Tennessee Chattanooga
Dana Moody, University of Tennessee at Chattanooga
Neslihan Alp, University of Tennessee at Chattanooga

**COMMON AREA REDESIGN FOR FULLNESS OF SENIOR LIVING**
Jun Zou, Louisiana State University
Liqun Wang, Hunan University
Shian Hu, Hunan University

**STORIED OBJECTS: POST-HOUSEHOLD DISBANDMENT OLDER ADULT PLACE-MAKING THROUGH MEANINGFUL POSSESSIONS**
Heather Carter, The Art Institute of Dallas

**Scholarship of Teaching & Learning - Open Track**

**COMPUTER AIDED DESIGN: DOES IT ENHANCE OR HINDER FLEXIBILITY AND CREATIVITY IN DESIGN PROCESS?**
Seda Dazkir, Georgia Southern University
Angelita Scott, Georgia Southern University

**THE RESULTS ARE IN: INTERIOR DESIGN PROGRAM CHAIRS REVEAL PERCEPTIONS OF CREDENTIALS FOR FACULTY**
Scholarship of Teaching & Learning - Pedagogy

THE IMPACT OF PRACTITIONER FEEDBACK ON INTERIOR STUDENTS’ CREATIVITY IN A LIGHTING DESIGN STUDIO
Hoa Vo, University of Minnesota
Abimbola Asiojo, University of Minnesota

SPIN THE WHEEL- TAKE A SPIN “A GAME BASED PEER CRITIQUE”
Noorh Albadi, University of Minnesota
Meghan Hendrickson, University of Minnesota

CROSS-LEVEL COLLABORATION ON COMMUNITY-BASED EXPERIENTIAL STUDIO PROJECT
Ann Theriot, Baylor University

DESIGN FUNDAMENTAL PREFERENCES AND INFLUENCES ON FRESHMAN DESIGN AESTHETIC
Kristin Maki, University of Alabama

Presentations

Scholarship of Design Research - Boundaries

SEEING THE FOREST AND THE TREES: A BIOPHILIC DESIGN RESEARCH REVIEW
Beth McGee, University of Florida

VIRTUAL SPACE: IS IT REAL?
Dana Vaux, University of Nebraska - Kearney
Michael Langlais, University of Nebraska - Kearney

CHALLENGING THE STATUS QUO : BIG IDEAS IN INTERIOR DESIGN EDUCATION
Helen Evans Warren, Mount Royal University
Rob Platts, Mount Royal University
Natalie Badenduck, Mount Royal University
Paula Dozois, Mount Royal University

INTERIOR PROXIMITY AND TRANSITION EFFECTS ON ENGAGEMENT IN MUSEUM GALLERIES
Elizabeth Schwab, Savannah College of Art and Design
Helena Moussatche, Savannah College of Art and Design
W. Kevin Wylie, A.I.A.
Meghan Woodcock, Savannah College of Art and Design

MASLOW’S EIGHT-TIER HIERARCHY OF NEEDS: THE WHISPERING PROTAGONIST OF HUMAN-CENTERED DESIGN
Steven Webber, Florida State University

Scholarship of Design Research - Culture

HAVANA: BEHIND THE FAÇADE – HISTORIC PRESERVATION IN HAVANA, CUBA
Dana Moody, University of Tennessee at Chattanooga

EXPANDING CULTURAL INTELLIGENCE THROUGH VARIOUS INTERNATIONAL DESIGN EXPERIENCES
Carl Matthews, Fay Jones School of Architecture
Caroline Hill, Texas State University
CASE AND POINT: TRANSFORMING THE B-SCHOOL, DESIGNING FOR A NEW MILLENNIAL CULTURE
MARGARET PORTILLO, UNIVERSITY OF FLORIDA
CANDY CARMEL-GILFILLEN, UNIVERSITY OF FLORIDA
ELIZABETH CALIENES, UNIVERSITY OF FLORIDA

SUSPENDING EXPECTATIONS: EFFECT OF CULTURE, GEOGRAPHY, AND CONTEXTUAL RELATIONSHIPS ON SEATING ARRANGEMENTS IN CAFÉS
LAUREN PILLOTE-WIELENGA, LAUREN PILLOTE CONSULTING
MAHA SALMAN, RCC INSTITUTE OF TECHNOLOGY/YORKVILLE UNIVERSITY

Scholarship of Design Research - Open Track

BUSINESS TRAVELER PREFERENCES: HOTEL DESIGN AND THE WELL BUILDING STANDARD
BRITTANY FLOCK, FLORIDA STATE UNIVERSITY
LISA WAXMAN, FLORIDA STATE UNIVERSITY

THE INFLUENCE OF ENGAGING INTERIOR ENVIRONMENTS ON THE BLOOD DONATION EXPERIENCE
MINYOUNG CERRUTI, UNIVERSITY OF IDAHO
CLARISSA RICHARDSON, UNIVERSITY OF IDAHO
SHAUNA CORRY, UNIVERSITY OF IDAHO

LIGHTING FOR SENIOR LIVING: A STUDY OF OLDER ADULTS’ PERCEPTIONS OF COLOR TEMPERATURE
EMILY BELL, THE OHIO STATE UNIVERSITY

UNLEASHING STUDENT VOICES ON A COLLEGE CAMPUS: A POST-OCCUPANCY EVALUATION FOR A STEM BUILDING IN HIGHER EDUCATION
SUSAN RAY-DEGGES, NDSU
RONALD DEGGES, NDSU
STEFNEE TRZPUC, BWBR
STEPHANIE MCDANIEL, BWBR

LUXMOTUS PAVILION: A CASE STUDY IN PHYSIC-BASED DIGITAL FABRICATION
SALEH KALANTARI, UNIVERSITY OF HOUSTON

SHIFTING SCHOOL DESIGN TO THE 21ST CENTURY: CHALLENGES WITH ALTERNATIVE LEARNING ENVIRONMENTS
BRYAN PEREZ, UNIVERSITY OF NEBRASKA-LINCOLN COLLEGE OF ARCHITECTURE
LINDSEY BAHE, UNIVERSITY OF NEBRASKA-LINCOLN COLLEGE OF ARCHITECTURE

A CASE STUDY EXAMINING HOW CLASSROOM LIGHTING INFLUENCES TEACHER PRODUCTIVITY
ALANA PULAY, OKLAHOMA STATE UNIVERSITY
TUTALENI ASINO, OKLAHOMA STATE UNIVERSITY

ACTIVE DESIGN: CREATING A BLUE ZONES MODEL FOR INTERIOR ENVIRONMENTS
ALEXIS HOLCOMBE, VIRGINIA COMMONWEALTH UNIVERSITY

THE IMPACT OF BIOMORPHIC DESIGN ON THE MEMORABILITY OF INTERIOR ENVIRONMENTS
HASTI MIRKIA, UNIVERSITY OF WISCONSIN-MADISON
MARK NELSON, UNIVERSITY OF WISCONSIN-MADISON

A PILOT STUDY EXAMINING STUDENT OPINIONS OF CLASSROOM FURNITURE FOR COLLABORATE TECHNOLOGY USE
ALANA PULAY, OKLAHOMA STATE UNIVERSITY
TUTALENI ASINO, OKLAHOMA STATE UNIVERSITY

BIOLOGICAL COMPUTATION AS A MEANS OF FORM-FINDING IN THE DESIGN PROCESS
### Scholarship of Design Research - Pedagogy

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STUDENTS’ PERCEPTIONS AND USE OF HISTORY IN DESIGN PROBLEM SOLVING</strong></td>
<td>Saleh Kalantari, University of Houston</td>
</tr>
<tr>
<td><strong>UNIVERSAL DESIGN IN INTERIOR DESIGN EDUCATION: NATIONAL SURVEY RESULTS</strong></td>
<td>Mohammad Hassan Saleh Tabari, Pars University</td>
</tr>
<tr>
<td><strong>NO CODES, NO PROBLEM: RESIDENTIAL DESIGN AS A FRAMEWORK FOR USER-CENTERED DESIGN</strong></td>
<td>Bryan Ortheil, Kansas State University</td>
</tr>
<tr>
<td><strong>ONE METHOD FITS ALL? : INDIVIDUAL DIFFERENCES IN COGNITIVE STYLES AND CREATIVE PERFORMANCE IN THE DESIGN PROCESS</strong></td>
<td>Mohammad Hassan Saleh Tabari, Pars University</td>
</tr>
<tr>
<td><strong>IMPROVING LEARNER OUTCOMES IN DESIGN AND ARCHITECTURE THROUGH INTENTIONAL ONLINE TEACHING STRATEGIES</strong></td>
<td>Bryan Ortheil, Kansas State University</td>
</tr>
<tr>
<td><strong>FINDERS OR MAKERS? LESSONS OFFERED ACROSS THE DISCIPLINES ON DEVELOPING CREATIVE CONFIDENCE</strong></td>
<td>Mohammad Hassan Saleh Tabari, Pars University</td>
</tr>
<tr>
<td><strong>DESIGN-RELATED TELEVISION SHOWS AND FIRST-YEAR INTERIOR DESIGN STUDENTS’ UNDERSTANDING OF THE PROFESSION AND BUILT ENVIRONMENT</strong></td>
<td>Bryan Ortheil, Kansas State University</td>
</tr>
<tr>
<td><strong>WANT TO ENGAGE MILLENNIALS: TRY PRESERVATION</strong></td>
<td>Mohammad Hassan Saleh Tabari, Pars University</td>
</tr>
</tbody>
</table>

### Scholarship of Design Research - Practice

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>“REAL WORK”: APPROACHES TO ADDRESSING WORK EXPERIENCE IN UNDERGRADUATE CURRICULUM</strong></td>
<td>Amanda Gale, University of North Carolina at Greensboro</td>
</tr>
<tr>
<td><strong>GET TO WORK: EVALUATING STUDENT INTERNSHIP EXPERIENCES</strong></td>
<td>Amanda Gale, University of North Carolina at Greensboro</td>
</tr>
</tbody>
</table>
MELANIE A DUFFEY, AUBURN UNIVERSITY

PINTEREST AS A COLLABORATIVE TOOL: NEGOTIATING PARTICIPATION IN THE DESIGN PROCESS
LEAH SCOLERE, COLORADO STATE UNIVERSITY

WELL-DESIGNED FOR SOCIAL WELL-BEING: A WELL CERTIFIED OFFICE PRE-POST CASE STUDY
SO-YEON YOON, CORNELL UNIVERSITY
SUSAN CHUNG, ASID
LILY SHI, CORNELL UNIVERSITY

EXPERIENCES OF DESIGNING WOMEN: A PORTRAIT OF FEMALE INTERIOR DESIGNER’S JOB SATISFACTION ACROSS CAREER-SPANS
ELIZABETH GOODNITE, COLORADO STATE UNIVERSITY
JENNIFER OGLE, COLORADO STATE UNIVERSITY
LAURA MALININ, COLORADO STATE UNIVERSITY
SAMANTHA CONROY, COLORADO STATE UNIVERSITY

A COLLABORATIVE APPROACH TO PROMOTE CHILD HEALTH AND EDUCATION THROUGH THE BUILT ENVIRONMENT
KRISTI GAINES, Texas Tech University

SPEECH INTelligibility for a SPEECH-LANGUAGE THERAPY CLINIC
MICHELLE PEARSON, Texas Tech University
KRISTI GAINES, Texas Tech University
CARLEY SHARTLE

TRENDS IN TUNABLE WHITE LIGHTING AND OFFICE INTERIORS
FRANCIS MEKHAIL, KGM - Architectural Lighting
MARIOTHERESA MEKHAIL, COMMON UNCOMMON

LED COLOR TEMPERATURE PREFERENCE AMONG OLDER ADULTS: SUPPORT FOR AGING IN PLACE
MITZI PERRITT, Stephen F. Austin State University
RAY DARVILLE, Stephen F. Austin State University
LAURA MAHER, University of Ohio - Akron
JULIE WHITMORE, University of Ohio-Akron

Scholarship of Design Research - Social Impact

UNDER CONSTRUCTION: HISTORIC PRESERVATION AND ITS RELATIONSHIP WITH PLACE ATTACHMENT AND USER COMFORTABILITY
DANA VAUX, University of Nebraska - Kearney
WILLIAM STOUTAMIRE, University of Nebraska - Kearney
SAMANTHA ROHMILLER

ENVIRONMENTAL AFFORDANCES OF PERSON-CENTERED CARE IN NURSING HOMES: ATTRIBUTES THAT CONTRIBUTE TO POSITIVE OUTCOMES
MIGETTE KAUP, Kansas State University

ASK ME: A PILOT STUDY TO IDENTIFY THE HOUSING PREFERENCES OF YOUTH WITH NEURO-DIVERSE DISORDERS (ND)
JULIE IRISH, University of Minnesota
MARILYN BRUIN, College of Design, University of Minnesota
NOORH ALBADI, College of Design, University of Minnesota

REFUGEES HOUSING, HEALING THROUGH GIVING
NAREDEEN MIKHAIEL, Virginia Commonwealth University
SUPPORTING ACTIVE LIVING AT HOME THROUGH INTERIOR DESIGN: OLDER ADULTS’ ACCEPTANCE OF INTERIOR DESIGN FEATURES AND ASSISTIVE TECHNOLOGIES

ELIF TURAL, VIRGINIA TECH
HELENE RENARD, VIRGINIA TECH
LISA TUCKER, VIRGINIA TECH
NANCY BROSSOIE, VIRGINIA TECH

SIX PRINCIPLES FOR INCLUSIVE DESIGN FOR VISION

KRISTI GAINES, TEXAS TECH UNIVERSITY
HUILI WANG, TEXAS TECH UNIVERSITY
ANGELA BOURNE, FANSHAWE COLLEGE
MICHELLE PEARSON, TEXAS TECH UNIVERSITY

CONTROL THROUGH INTERIOR DESIGN: HOW SEGREGATED CORRECTIONAL ENVIRONMENTS AFFECTS BEHAVIOR

GREGORY GALFORD, CHATHAM UNIVERSITY

USING A DESIGN THINKING FRAMEWORK TO DEVELOP EMPATHY FOR SYRIAN REFUGEE CHILDREN

HOLLY MURDOCK, UTAH STATE UNIVERSITY
JOAN DICKINSON, RADFORD UNIVERSITY
KATHLEEN SULLIVAN, RADFORD UNIVERSITY
LORI A ANTHONY, RADFORD UNIVERSITY

Scholarship of Teaching & Learning - Boundaries

PAUSE AND PLAY: A PARTICIPATORY DESIGN-BUILD COLLABORATION

MILAGROS ZINGONI, ARIZONA STATE UNIVERSITY

VIRTUAL REALITY FOR DESIGN STUDIO CRITIQUES: EXPERIENCES OF STUDENTS AND IMPACTS ON THE DESIGN PROCESS

ELIZABETH POBER, UNIVERSITY OF OKLAHOMA
MATTHEW COOK, UNIVERSITY OF OKLAHOMA LIBRARIES

WHAT DOES A TREE HAVE TO DO WITH INTERIOR DESIGN?: RETHINKING THE FOUNDATIONAL PROCESS, PERCEPTION AND EXPERIENCE

HELEN TURNER, UNIVERSITY OF KENTUCKY

LIVING SYSTEMS >> ADAPTIVE BOUNDARIES

RANA ABUDAYYEH, THE UNIVERSITY OF TENNESSEE - KNOXVILLE

PROTO MODULAR | CRITICAL SETTINGS: EXPERIENCE LEARNING IN THE AGE OF DIGITAL FABRICATION

RANA ABUDAYYEH, THE UNIVERSITY OF TENNESSEE - KNOXVILLE

A NEOCLASSICAL REVIVAL INSIDE AN ALTOID BOX

DARRIN BROOKS, UTAH STATE UNIVERSITY

Scholarship of Teaching & Learning - Culture

CULTURE AND ITS EXPRESSION IN ARCHITECTURE: EXPLORING CULTURE IN DESIGN FROM ENVIRONMENT-BEHAVIOR STUDIES’ PERSPECTIVE

SUINING DING, INDIANA UNIVERSITY PURDUE UNIVERSITY FORT WAYNE

LIBRARY DESIGN: AUTHENTICITY, ACCEPTANCE, AND ADVOCACY

JAMIE LYNN SLENKER, UNIVERSITY OF NEW HAVEN
BEYOND THE PROJECT: AUGMENTING GLOBAL LEARNING IN THE STUDIO
JEANNE MERCER-BALLARD, APPALACHIAN STATE UNIVERSITY

HOW DO YOU KNOW: EVALUATING THE EFFECTIVENESS OF COMMUNITY ENGAGED SCHOLARSHIP THROUGH PHOTO DOCUMENTATION
STEPHANIE SICKLER, FLORIDA STATE UNIVERSITY
AMANDA GALE, UNIVERSITY OF NORTH CAROLINA GREENSBORO

CREATING MEANINGFUL SPACES IN DESIGN STUDIOS
PETRA PROBSTNER, COLUMBIA COLLEGE CHICAGO

PLACE MAKING FOR THE TRANSFER OF CULTURE
CATHERINE DOWLING, RYERSON UNIVERSITY

Scholarship of Teaching & Learning - Open Track

A CASE STUDY OF GAME BASED LEARNING IN INTERIOR DESIGN
ZINA ALASWAD, UNIVERSITY OF SOUTHERN MISSISSIPPI

TEACHING TASTE (AND) (THROUGH) MEDIA
KARIN TEHVE, PRATT INSTITUTE

SPATIAL DESIGN AND THE IPHONE: UTILIZING STUDENTS’ COGNIZANCE OF AN EVERYDAY TECHNOLOGY TO INVESTIGATE AND DESIGN SPACE
SHERYL KASAK, PRATT INSTITUTE

NOT YOUR FATHER’S CHARRETTE: USING VIDEO AS A DESIGN TOOL
DAVID BROTHERS, NEW JERSEY INSTITUTE OF TECHNOLOGY

TEACHING THE SPATIO-TEMPORALITY OF THE HUMAN BODY: A CROSS-DISCIPLINARY DESIGN EXPLORATION
JAIN KWON, UNIVERSITY OF GEORGIA

Scholarship of Teaching & Learning - Pedagogy

VISUAL COMMUNICATION: PEDAGOGICAL ADVANCEMENTS THROUGH A FLIPPED CLASSROOM METHOD
JONATHON ANDERSON, RYERSON UNIVERSITY

COMMUNITY COLLABORATION: A TEEN HUB
RENE KING, COLUMBIA COLLEGE CHICAGO
JOAN GIROUX, COLUMBIA COLLEGE CHICAGO

MOVING PAST INSTRUCTOR BASED FEEDBACK: USING METACOGNITIVE REFLECTION IN THE DESIGN STUDIO
LISA PHILLIPS, PHILADELPHIA UNIVERSITY

DEMONSTRATING AN UNDERSTANDING OF LIGHTING DESIGN THEORY THROUGH A MULTIMODAL EXPERIENTIAL LEARNING PROJECT
MIA KILE, UNIVERSITY OF OKLAHOMA
RON FRANTZ, JR., UNIVERSITY OF OKLAHOMA

FROM STEM TO STEAM: AN INTERIOR DESIGN STUDIO AS A MEANS FOR CROSS-CAMPUS INTERDISCIPLINARY COLLABORATION
LESA LORUSSO, UNIVERSITY OF FLORIDA
CONNECTING MEANING AND FORM: USING POPULAR ICONIC IMAGERY FOR CREATIVE APPLICATIONS
KATHERINE SWANK, EAST CAROLINA UNIVERSITY
JAMES HIGGINS, EAST CAROLINA UNIVERSITY
SUSAN MEGGS, EAST CAROLINA UNIVERSITY

REDEFINING RETAIL DESIGN: A COLLABORATIVE APPROACH TO MILLENNIAL-CENTRIC SOLUTIONS
REBEKAH MATHENY, THE OHIO STATE UNIVERSITY

TEACHING DIVERSITY ON CAMPUS: REFLECTIONS ON A COLLABORATIVE INTERIOR DESIGN STUDIO
ELIF TURAL, VIRGINIA TECH
MATT WAGNER, VIRGINIA TECH

CONTEMPLATIVE PRACTICES IN THE INTERIOR DESIGN STUDIO CLASSROOM
COTTER CHRISTIAN, PARSONS SCHOOL OF DESIGN, THE NEW SCHOOL UNIVERSITY

DRAWING AS EXPERIENCE: INTEGRATING EXPERIENCE THROUGH DRAWING
MICHAEL CHISAMORE, UNIVERSITY OF MEMPHIS

CREATIVE PROJECT: RE-USE INSPIRED LUMINAIRE
FARIDA GABDRAKHMANOVA, SAN DIEGO MESA COLLEGE

Scholarship of Teaching & Learning - Social Impact

HARNESSING THE UNIVERSAL DESIGN PRINCIPLES TO SUPPORT CEREBRAL PALSY CARE IN RESIDENTIAL HOUSING
EMILY MCLAUGHLIN, INDIANA UNIVERSITY-PURDUE UNIVERSITY INDIANAPOLIS

SHAPE YOUR SHELTER
MONA GHANDI, WASHINGTON STATE UNIVERSITY

SERVICE-LEARNING PROJECTS: A REALITY CHECK FOR INTERIOR DESIGN STUDENTS
STEPHANIE MCGOLDRICK, MOUNT IDA COLLEGE

STUDENT ENGAGEMENT WITH DISPLACED POPULATIONS
WILLIAM MANGOLD, DREXEL UNIVERSITY
D.S. NICHOLAS, DREXEL UNIVERSITY
WILLIAM MANGOLD, DREXEL UNIVERSITY

A PROGRAM’S JOURNEY TOWARD MEANINGFUL STUDENT PUBLIC SERVICE
SALLY ANN SWEARINGEN, IDEC, ASID, IIDA
LEISHA BRIDWELL, STEPHEN F. AUSTIN STATE UNIVERSITY
MITZI PERRITT, STEPHEN F. AUSTIN STATE UNIVERSITY

AN ADAPTABLE SPACE OF SOUND AND VISION: PROPOSALS FOR A SMALL TOWN HISTORIC THEATER
KEVIN MOORE, AUBURN UNIVERSITY

TEACHING SUSTAINABLE DESIGN TO NON-DESIGNERS: LESSONS LEARNED FROM A CROSS DISCIPLINARY FIRST YEAR SEMINAR
TREVA SPROUT AHRENHOLTZ, UNIVERSITY OF WYOMING

Pecha Kucha

SPEAK LOUDLY AND CARRY A SMALL STICK: PROMOTING BETTER PUBLIC SPEAKING IN THE INTERIOR DESIGN STUDIO
ROBERTO VENTURA
VIRGINIA COMMONWEALTH UNIVERSITY

A PECHA KUCHA ABOUT A PECHA KUCHA: ENGAGING STUDENTS IN A HISTORY OF INTERIORS COURSE

JULIE IRISH, UNIVERSITY OF MINNESOTA

USING THE REAL WORLD AS A CLASSROOM: HOW COLLABORATION & HUMAN-CENTERED DESIGN TEACH EMPATHY

ANNA RUTH GATLIN, AUBURN UNIVERSITY

SUPER VILLAINS: DESIGNING FOR RESTRAINT OR REHABILITATION IN THE COMIC BOOK UNIVERSE

STEVEN WEBBER
FLORIDA STATE UNIVERSITY

CREATING MEANINGFUL SPACES IN DESIGN STUDIOS

PETRA PROBSTNER, COLUMBIA COLLEGE CHICAGO

DRAWING DOWN THE BONES: FIVE CREATIVE DESIGN PROCESSES ADAPTED FROM GOLDBERG’S METHODS

LINDSAY TAN, AUBURN UNIVERSITY
CREATIVE SCHOLARSHIP
Material Drawing Narrative

John Humphries, Miami University

ABSTRACT

Artist Statement: Material Drawing Narrative Drawings can be of any material they preference the materials and tools. Drawings have two dimensions. Or, could have three if we add depth to the plane: it is not impossible. Space has three dimensions. Or, could have four if we dared to add a story, a narrative, or memory: it is not impossible. In order to convey a more complete image of a complex shifting situation the artist borrows from the Beaux-Arts tradition of analytique drawings which simultaneously included perspectival, orthographic, and conceptual images at various scales within the picture frame. These conceptually framed drawings contain a potential broader than things made to communicate design decisions. It is a mode which can consider intentions and attitudes, literal aspects and abstract thoughts, complexities and contradictions, fantasies and intricate relationships, along with fragmented notions. While the process of drawing can be both tangible and speculative, it is the speculative nature that can provide a significant contribution to the process of making. Without the firmness required of representing an object, one can investigate tectonic ideas of space, narrative, texture, order (and disorder), connection, human passage, and material. Through this ambiguity a drawing can transform a notion, idea, or concept and allow for one concept to connect to another. By embracing the conceptual nature of representation the author has begun to slowly develop a body of work which translates common objects from nature into a complex watercolor drawing to understand the elements which are kept and things lost in translation. The drawings utilize themes and organizational devices from landscapes, historical narratives, and built environments. These drawings are emotional and technical but with a colorist's sensibility. They link the visual language of landscape, color theory, and constructed elements. The work, watercolor drawings, is made by observing environmental phenomena (here referred to as natural characters wind, clouds, birds, horizon,
etc.) and, through abstraction, assists these characters in describing an essential story about the landscape and built environment. Watercolor drawings use water media emphasizing mark making revealing the tool and media used in executing the painting. Often the drawings incorporate physical elements embedded into the surface of the paper. I figure if Jim Dine can attach a real light switch to paper and call it a painting--I can add wood and metal parts and still call it a drawing. Images 001-005 describe the interactions of clouds (the reddish forms), the horizon line (the green forms) and the migration of birds, with a hint of the power and telephone lines. Images 006-010 describe a basilica like rectangular but form carved and cut up by secretive conversations (the grey elements) with the wooden elements referencing sight lines and particular views. Perhaps an equivalent analogy of transformation might be of industrial food production, where nearly inedible field corn can become ethanol, xanthin gum, acoustical ceiling tiles, or chicken nuggets. The artistic and nutritional values of these processes are yet to be evaluated by the FDA.
image 2 Cumulus Battles the Mockingbird Song
image 3 Jays Remember the Pines
image 4 Starlings Settle for the Evening
image 5 Rains Bring Much Activity
image 6 Three Secrets Lost to Maria Maggiore
image 7 The Basilica of Many Intentions
image 8 Not All Chapels Shun the People
image 9 San Clemente Blesses the Children
image 10 Gilded Termites of the Vatican
Design as Art | Creative Scholarship

72 Seasons

John Humphries, Miami University

ABSTRACT

These ceramic pieces are based upon this Japanese notion of 72 seasons. The idea is that the passage of the year is not based upon a clockwork mechanism or an arbitrary calendar, but by the activities of the natural environment, it is an everyday life almanac. There’s a long and celebrated tradition of seasonal attunement in Japan. Imagine the year broken into periods of time of 4-7 days with each block of time having a corresponding event in nature—resulting in the shichijuuni-ko, or 72 mini seasons of Japan. This highly nuanced calendar takes off from the 24 divisions of the calendar year, or sekki (24 seasons). Each of the 24 seasons is further divided into three even more nuanced periods, resulting 72 seasons in all. According to this division of time. The 24 seasons were plotted on an ancient lunar calendar. It was made to conform to the Gregorian calendar in the 1873 during the “modernization” of Japan. A perfect translation from a lunar to a solar calendar is impossible. The differences caused most traditional Japanese holidays and seasons to shift in time and show up on the new solar calendar months later than their original seasonal timings and attunements. My new pieces are trying to depict the passage of time in the Midwest by activities and phenomena rather than arbitrary dates. Included in my list of events are things like "harvesting of corn", "the first prediction of snow", "the last mowing of the year", "the geese returning", "peas are planted", or “the running of the wiener dogs". These ceramic pieces use lines and cuts to abstractly represent these events; the resulting carved slab is rolled to represent a vase like form (or some kind of vessel). Consider the final pieces as memorial urns or votives to help one be more aware of their environment. Currently I have 31 of these made and work is underway on the other 41. These are not literal pictorial representations; they are abstracted in a way to remind a viewer to watch for something or to spark a memory of something slightly forgotten. Similar to the way constellations were used to assist in the telling of stories in times past. The connection to interior design is to increase the
ways which one can both represent and understand the complexities of human experience and travel through time.
image 001 Tulips Eaten by Deer
image 002 Fireflies Rise from the Grass
image 003 Labor Day Fireworks Awe
image 006 Swallowtails Finish Their Transformation
Ruga Lumina: Folding Interior Skin with Dynamic Light

Jiangmei Wu, Indiana University

ABSTRACT

‘Ruga’ is the Latin word for making wrinkles and folds. In spatial design, these architectural-scaled folds, creases, and wrinkles provide malleable, adaptable and flexible spaces that allow for a body’s movements in space. Ruga Lumina’s skin, like its organic name-sake, registers spatio-temporal changes and materialized lighting affects; it is the in-between of subjects and objects, interiors and exteriors, selves and others, marking these dichotomies, incorporating the one in the other, but belonging fully to neither. Both like, and in conversation with, the human beings who come to experience it, Ruga Lumina registers these dichotomous differences through the folds of its skin and its resulting expressions as active illumination. The experience of making and folding the Ruga Lumina ‘skin’ is more akin to cloth making than to wall building. Similar to a piece of garment that creates an intimate enclosure for the body and allows the body to both ‘move with it’ and be expressed by it, Ruga skin’s folded topology both encloses and also registers bodies in physical and social spaces. For Ruga Lumina, the folded patterns that were produced from the parametric process were first laser cut and then hand scored and folded. The material is polypropylene corrugation panels that are 4mm in thickness. Because of the flexibility in the folds, the Ruga interior skin is essentially a movable and pliant surface. Like a piece of garment that is formed by the bodily structure, the Ruga Lumina skin is also shaped by a skeleton. After the skin was stiffened by adding plastic brackets and tensioned wires hung from above, the skeleton was then removed to reveal the cavity that the Ruga skin embraced. In Ruga Lumina, interactive technologies are seamlessly integrated with the physical material construction. The projectors deliver the dynamic colored light and the sensors pick up the body’s depth information in the space. The space around Ruga Lumina is divided into six zones on each side. Through the custom computer codes in Processing, the information triggers the video animations to display different colors in the areas on Ruga Lumina that correspond to the zone.
The more bodies that step into a zone, then the warmer the color that will be displayed on Ruga Lumina in the area that is associated with that zone. Furthermore, the generative colored lights must be meticulously painted onto its three-dimensional topology using a mapping process. Unlike a simple projection onto a flat screen, projection mapping registers digital content onto the physical three-dimensional spatial construct by interacting with its surface. In other words, the digital content, acting as a virtual ‘skin,’ must be created based on the unique characteristics of the physical Ruga ‘skin,’ so that the two will be registered. By dynamically highlighting any shape in the digital ‘skin,’ the projection mapping transforms Ruga’s skin into a smart illuminated display that links a person’s body directly to the space in which the body is situated.
Above: Ruga Lumina at the Detroit Center for Design and Technology. Viewed from different angles, its contours and edges change drastically.

Left: A body tries to feel the folded light at Ruga Lumina installation at the Detroit Center for Design and Technology.
Left: A person walks up to Ruga Luminna at 3Labs in Culver City, California, in order to observe the shadow plays of the bodies on Ruga Luminna.

Right: Details of Ruga Luminna showing the shadow plays of bodies at 3Labs in Culver City, California.

Right: A body tries to feel the folded light at 3Labs, Culver City, California.
Left and top: The installation of Ruga ‘skeleton’ and ‘skin’ at the Detroit Center for Design and Technology.

Right: Finished Ruga ‘skin’ with the ‘skeleton’ removed at the Detroit Center for Design and Technology.
Top: Schematic plan showing the body-color relationship. The digital colors are triggered by the number of bodies in the space. The cool color scheme indicates that there are few bodies in the space, while the warm color scheme indicates that there is a crowd.

Left: Setting up projection and sensor technologies in Rugs Lumina at Detroit Center for Design and Technology. A computer screen was projected onto the Rugs skin in order to test the resolution of the projection.

Right: Projection mapping of Rugs Lumina at Detroit Center for Design and Technology. The images shown on the computer screen must be precisely registered on site in order to match the physical skin when projected.
AVA

Jeffrey Day, University of Nebraska
E.B. Min, Min Day

ABSTRACT

Striking and sculptural, AVA© is a modular storage and display system allowing multiple configurations from individual use to a simple stack to highly dynamic and unexpected agglomerations. Inspired by mathematical tiling procedures that produce complex, recursive systems from simple repeated parts, AVA© is product in a furniture line – infrastructure for living & working – that recognizes our inherent desire to re-arrange space. AVA© is a single unit that, when repeated and combined, forms the base of a complex furniture system. The units can be used individually or in small groups to form side tables or benches, or the can be composed indefinitely to form large shelving walls or display stacks, or sculptural forms appreciated for their inherent qualities. Turned sideways and with a closed back (bottom side) AVA© can has even been used as a planter. Small rare-earth magnets hold the individual units together when combined in sculptural arrangements or stacks. Custom installations may be permanently fastened or welded together as room dividers or architectural wall systems, and brackets are available from seismic bracing. Permanent attachment or bracing is recommended for installations over 5 units tall. The individual units are fabricated from 10ga steel, formed on a brake and welded at one edge. AVA© is available in two finish options: standard powder coated steel or two-toned with the exterior surfaces waxed, mill-finished hot rolled steel and the interior shop-painted with auto-body paint. Unit dimensions: 24”w x 14”d x 13.5”w
AVA is a single unit that, when repeated and combined, forms the base of a complex furniture system.
AVA is formed from a single sheet of 10ga steel with one welded joint.
AVA unit geometry

16°

60°

71°
AVA recursive geometry and stacking options
AVA is available in two finishes: standard powder coat and shop paint with waxed, mill-finished hot rolled steel.
AVA rotational stacking
AVA integrated into millwork
Mythical Architecture

Saral Surakul, The University of Georgia

ABSTRACT

The origin of the project came from my short visit to a traditional art exhibit in Hangzhou, China. The Chinese paintings inspired me to create a series of architectural renderings, depicting unconventional buildings in traditional Chinese landscape. The architecture delineated in this project proclaims that imagination has no boundary nor compromised by constructional restriction. The visionary illustration challenges viewers to go beyond their cognitive thinking and to explore. The design concept orbits around the theme of Chinese dragons, the important mythical creatures. Dragons represent power, strength and good fortune. The myth says that dragons can be transformed into various water creatures, such as fish and turtle. The Chinese Emperors also used the dragons to symbolize their divine power. From start to finish, architectural visualization has always been a crucial part of the design process. It has constantly changed as art materials and technology evolve. The traditional use of ink, watercolor and markers gradually gave way to realistic computer-generated images. Having come from the generation that marks the beginning of the computer application and being trained to render manually, I have always been looking for a happy medium between the two. To achieve the desired outcomes, I employed various methods of both traditional and digital imaging. The architectures were modeled and rendered in three-dimensional software. The landscape elements were manually created in ink and watercolor. Photoshop was the tool used to combine both elements together. The mythical architecture reflects my strong believe that art can inspire design, and vice versa. The Sleeping Dragon Hotel This image was my first attempt to merge manual and digital techniques. The snake-like dragon inspired the form of the architecture. The building intertwines with the majestic landscape, creating a contrast between man-made objects and
natural environments. The hotel appears to be a dragon floating in the clouds. The Phoenix Observation Tower The Chinese phoenix inspires the design of this observation tower. The phoenix traditionally represents the Empress as opposed to the dragon (the Emperor). The display of this image with the Sleeping Dragon signifies the harmony of Yin and Yang. The conceptual observation tower is situated over the waterfall as Yin (female) is considered a cool element. The Turtle Floating Stage The dragon turtles are commonly used in feng shui practices. They have the body of a turtle and the head of a dragon. The dragon turtle is believed to attract wealth and bring protection. The turtle-like floating performing stage is design to be a private place where Chinese opera is performed in the middle of the nature. The Fish Retreat The old legend says that a koi was turned into a dragon by gods after successfully jumped to reach the top of the waterfall. His attempt took a hundred years. The story gave me an idea to create a fish-shaped retreat. The building is floating on the peaceful river where the mist conceals the building from the outside world.
Concept Sketches
鳳凰
The Phoenix Observation Tower
20” x 48”
Mixed Media
The Turtle Floating Stage
48” x 20”
Mixed Media
The Fish Retreat
48" x 20"
Mixed Media
魚
A Personal Reflection on Racial Identity's Intuitive Influence on the Creative Process

Felicia Dean, University of North Carolina at Greensboro

ABSTRACT

Craft methodologies are learned and adapted based on experience, yet are closely associated with identity. Though personal identity is a conscious awareness of a person’s association with their surrounding environment, it is also a standard of societal labeling and categorization. Within the confines of creativity, if we take away the outside environment’s need for hard line distinctions creative methods evolve from a person’s approach to designing and making based on taught ways of thinking, and an individual’s self-identity. In this case identity is associated with categories of race, practice, and profession. As a result, the craft methodology presents itself as an intuition of exploration and direction of approaches based on the vernacular. This concept focuses on how my personal bi-racial (mixed race of Caucasian & African–American) identity has instinctively run throughout my creative exploration, methodology and processes. The approaches are not literal responses, but rather unconscious modes of development with abstracted definitions linked to a bi-racial identity. Over the last three years I have been searching for more of an emotional identity with my work, yet not to the extent of solely desiring to make works of art. I recently realized it has always been present in my work. However since my design work is linked so strongly to theory, materials, systems, function, and standards I have overlooked how my racial identity has directed my craft. In addition, I have begun to realize the impact of my identity on my approach to practice and profession. My approach to craft, practice and profession has never been singular, but rather a mix of the definitions of art, design, and craft, where my work is not solely identifiable as one or another, but rather is a plurality of characteristics and approaches. I’ve come to understand that I’ve always straddled two or more creative roles that have been
highly influenced by my bi-racial self-identity. The link of my self-identity to my professional work has allowed me to begin to understand my approach in the context of design and craft as a form of artistic expression. The creative processes related to my biracial self-identity are experimental and use a multitude of various types of exploration related to design, development and the fabrication of furniture, sculpture and craft works. I mix materials. I mix processes. I mix disciplinary and creative approaches. I’m not afraid to take a chance to learn, explore, or fail. I’m not restrained to one creative identity. For instance, I work both digitally and by hand. This includes pairing digital fabrication and handmade methods of making. Projects unfold from initial explorations on lathes, then to 3D scanning, then digital modeling, CNC milling, and last to hand carving. Projects evolve by connecting processes that are generated by another. For instance, using wood shavings produced from lathe turning to naturally dye felt. In other projects, I sew woven sheets of fiber-glass, I use textile dying techniques that are associated with wood ebonizing methods, and I hand sew surface designs that I 3D scan and apply to objects that are CNC milled. Ideas are not isolated or separated, but rather integrated. Many objectives permeate throughout my association of my bi-racial self-identity to my creative process. The output of one process is used to inform another, strengthening the conversation around the identity of the work, broadening the scope. One objective is to understand where my creative work and approaches fit in practice and professionally. The other is to understand how to personally reflect on WHY I design the way I do beyond my interest/the standards/the trends/the practice, and not just intuitively do and respond during the design and making processes. Rather it involves digging deeper into understanding where the intuition is coming from and how self-identity influences the WHY of the creative process.
DUG BY THE DEVIL

Materials: stone

Process:

Foam injected fabric model with hand sewn surface treatment. Later 3D scanned
Robotic arm stone carving of final revised 3D model. 3D revised model obtained by 3D scanning foam injected model and digitally editing and manipulating the form.

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**Sew & Cut**

Materials: cherry wood

Process: undulated CNC carved surface is a result of the application of a 3D scan of a hand sewn surface design originally created in felt. Iron modifier used for altering naturally dyed fabrics was used for an ebonized finish.

(photo credit: XXXXX, please request name if used)
DRIFT 4
Materials: Basswood

Process

Stackable asymmetrical modular forms. Turned on a lathe.
Underwear_BW1 & Outerwear_FC1
Materials: Basswood, wool felt, teak wood natural dye
(photo credit: XXXXX please request name if used)

Process

Digital carving with CNC indexer. Form developed from 3D scans of the modular pieces from the DRIFT project.
Home-made: Traversing the Interior Landscape

Lois Weinthal, Ryerson University
Andrew Furman, Ryerson University

ABSTRACT

Project concept for the development of 'Home-made' The body traverses a room and a landscape in similar ways, but the scale of each is uniquely different in experience. The conceptual formation of this project brings these two scales together for an art installation at a juried design event in a North American city. A guiding question was how to bring the outside landscape to an interior room so that one can move across a room and landscape at the same time. This concept led our two-person team to make reference to maps and envelopes since both are experienced at the scale of the individual but find their way into the landscape at a greater geographical realm.

Precedents as starting point The question of how to bring the outside to the inside led us to look at two precedents as examples. We were inspired by the work of the Land Artist Richard Long whose work connects the body to space by re-tracing a line made by travel onto the earth. The second inspiration came from the photographer, Abelardo Morell, who turns rooms into pin-hole cameras. This analog technology captures images of outside and brings them to the inside through the phenomenon of optics that flips the image upside down and backwards. This same concept guided the decision to install the landscape flipped upside down so that viewers could physically traverse the landscape from underneath. Maps and topography provide a measured understanding of landscape, whereas a single enveloped mailed by an individual traverses the landscape bringing together two scales at once – the personal and measured. 'Home-made' references these scales with sections of the city’s landscape in which this project took place rendered in #10 envelopes. Creative development A selection of the landscape was rendered in room sized section cuts as a means to unite the volume of the room with topographic map data. The introduction of a horizontal datum brought together the human scale and the scale of the landscape. The peaks and valleys of the landscape formed an intimate enclosure so that visitors could experience the
landscape from the inside. Design method Section cuts of the landscape were made and #10 envelopes were arrayed into modular sheets of material responding to differences in weight along the length of the section. To do this, the constructed landscape sections were installed upside down and hung from the ceiling so that the visitor could engage the landscape, experiencing the volume of the section that is atmospheric and perceive the contours while moving smoothly within the room. Reflection on the project The intent of this art installation was to bring a landscape to the interior, but the outcome resulted in unanticipated qualities. Visitors walked under and through a landscape, where light and the materiality of the envelopes resulted in a translucent cloud-like effect. The resulting interior-scape created voids and forms, patterns and opportunities for light and new affordances.
The concept of traversing a landscape at the scale of the individual and a greater geographical area established the foundation for this art installation that sought to bring the exterior to the interior.

This project was accepted into a juried art competition that addressed the theme of 'Transplant,' as a reflection of the transfers and exchanges of ideas, knowledge, and culture.

Twenty-five sections through a natural and manmade site were constructed using #10 mylar envelopes set into a grid. The topography of the landscape disrupted the regularity of the grid and in doing so, a new texture formed that was both regular and irregular. The inverted landscape occupied a space of 6' x 6' x varying depths inside of a room 11' x 15'.

Home-made
Studies were made with sections of the landscape with a range of materials to understand their relationship through translucency and overlap as a means of establishing a continuum much like the experience of traversing a landscape. The reinterpretation of the natural landscape into artificial materials (mylar) and light afforded degrees of manipulation from natural to artificial, as is often the case from landscape to interior.

Mylar envelopes became the material to construct the individual landscape sections which reinforced the scale of the individual to a greater geographical area.

Home-made
Home-made
The vagaries of daylight throughout the day and the introduction of artificial light at dusk brought out presences of colours, shadow contours and transparency.

When drawing near to the project, the form affords exploration and interaction when encountered alone or in a group. Different pathways and vantage points are possible.

Home-made
Home-made
Home-made
Design as Art | Creative Scholarship

Connecting: An Installation About Stairways (and Escalators or Elevators)

Thom Houser, University of Georgia

ABSTRACT

“Connecting: Stairways to . . .” is a juried, site-specific installation in a community art center. It explores connections and expectations occurring while we view, approach and experience stairs, stairways and stairwells, ranging from stoops to grand staircases to elaborate escalators. There are three major components within this 1300 square foot installation. At one end of the gallery an 8’W 12’D 6’H MDF and metal assemblage with three stepped video screens offer the viewer passage up and down escalators in Renzo Piano’s Centre Georges Pompidou, where a broken escalator becomes a clunky stairwell. The videos then move the viewer into I.M. Pei’s Pyramide du Louvre to take an escalator down to the museum’s entrance. Next, passage is offered on elevators in Jean Nouvel’s Institut du Monde Arabe. Finally, the viewer takes stairs up from a Paris Metro and encounters a jocular street musician. A fourth monitor at the back of the sculpture offers rides back down the escalator. The second major component of Connecting . . . is an array of more than 50 photographs of stairs, stairways, stairwells, escalators and elevators stepping up and wrapping across the walls around the escalator at one end of the gallery and the pillars at the other (see below). • Entering • Processing • Accessing • Escaping • Blocking access • Socializing • Exploring • Performing • Watching The third and the major part of this installation is a chevron of five stele-like pillars, each measuring 52’W 52”D 84”H and each having two 24”W 72”H backlit panels. The front image on each pillar superimposes an abstracted and reconfigured image looking down into a stairwell with unexpected objects at the base. • A spiral staircase in an Italian café leading to polluted canal waters • A stairwell at Hadid’s Maxxi Museum leading to a landfill • Other spirals filled with trash cans from St. Mark’s Square in
Venice • A museum staircase leading to a mass of votive candles • Gallery stairs revealing images of both total solar and lunar eclipses The back panel of each pillar presents dramatically, surrealistic recoloration of the front. The psychedelic trauma of the undersides of these images offer glimpses into the unknown. The five pillars in this installation jut forward in a chevron the pushes on the viewer entering the gallery. From the entrance the viewer can only see the real coloring of the stairs and the views beyond. As the view walks towards the end of the gallery the pillars push towards the gallery wall, pressing on the viewer’s psyche. After being forced into the corners of the gallery because to the size of the pillars, the contrasting backs are revealed, offering an altered view of each pillar. As an interior designer with a background in music, my work always has been sensitive to time, movement and performance in space. For me installation art is a natural outgrowth of interior design. My installations rely heavily on layering of information, offering you distinct experiences from a distance and up close. They are designed to pull you into and through a space or towards and around an event. Each installation is site-specific and rarely could, or should be assembled in the same configuration at another location.
Escalator sculpture with videos moving up the stairs
Pixelated History: An Exhibition of Virginia Architecture

Roberto Ventura, Virginia Commonwealth University

ABSTRACT

Project concept for the development of 'Home-made' The body traverses a room and a landscape in similar ways, but the scale of each is uniquely different in experience. The conceptual formation of this project brings these two scales together for an art installation at a juried design event in a North American city. A guiding question was how to bring the outside landscape to an interior room so that one can move across a room and landscape at the same time. This concept led our two-person team to make reference to maps and envelopes since both are experienced at the scale of the individual but find their way into the landscape at a greater geographical realm.

Precedents as starting point The question of how to bring the outside to the inside led us to look at two precedents as examples. We were inspired by the work of the Land Artist Richard Long whose work connects the body to space by re-tracing a line made by travel onto the earth. The second inspiration came from the photographer, Abelardo Morell, who turns rooms into pin-hole cameras. This analog technology captures images of outside and brings them to the inside through the phenomenon of optics that flips the image upside down and backwards. This same concept guided the decision to install the landscape flipped upside down so that viewers could physically traverse the landscape from underneath. Maps and topography provide a measured understanding of landscape, whereas a single enveloped mailed by an individual traverses the landscape bringing together two scales at once – the personal and measured. 'Home-made' references these scales with sections of the city’s landscape in which this project took place rendered in #10 envelopes. Creative development A selection of the landscape was rendered in room sized section cuts as a means to unite the volume of the room with topographic map data. The introduction of a horizontal datum brought together the human scale and the scale of the landscape. The peaks and
valleys of the landscape formed an intimate enclosure so that visitors could experience the landscape from the inside. Design method Section cuts of the landscape were made and #10 envelopes were arrayed into modular sheets of material responding to differences in weight along the length of the section. To do this, the constructed landscape sections were installed upside down and hung from the ceiling so that the visitor could engage the landscape, experiencing the volume of the section that is atmospheric and perceive the contours while moving smoothly within the room. Reflection on the project The intent of this art installation was to bring a landscape to the interior, but the outcome resulted in unanticipated qualities. Visitors walked under and through a landscape, where light and the materiality of the envelopes resulted in a translucent cloud-like effect. The resulting interior-scape created voids and forms, patterns and opportunities for light and new affordances
need to test this area out: squares? or work with image aspect ratio and work text into it to create square?
need to mock-up text selections

#30 ARCHITECTURE THING
but of course a quote from a lay person about this piece of architecture across here might make this look better
lay person

NOT TOP 100 avoid a list
PIXELATED HISTORY: AN EXHIBITION OF VIRGINIA ARCHITECTURE

SKETCH 1
FOR PANELS: A-H

centerline of exhibit display area

top quote height & width varies
maxim dimension: 65” x 65”

panel dimensions
height: 46.25”
width: 40” or 65”
see panel schedule (page 2)
for specifics

bottom quote
15” high x 65” max
(width varies)

SCHEMATICS each project is a small, incomplete reflection of what we value
PIXELATED HISTORY: AN EXHIBITION OF VIRGINIA ARCHITECTURE

EVOLUTION the collection is a mosaic, a pixelated mirror
Consult the general as in place in all,
That tells the weather to rise, or fall;
To help the crops, fill the basins to scale;
In slopes inclining, theatres the wise;
Casts in the eyrie, catches opening gales,
Joins in the great, and varies shades here shades,
None better or more direct, 
In spreading trees;
Pawing land, and plain, and, as you work, design.

—W. W. Willard Boyle, first of Bulloch
by Alexander Pope
INSTALLATION the exhibit was organized horizontally with a head (orange band), body and base (blue-purple band).
24 March 2014

I made a couple of changes here, highlighted in yellow. Because of this, do you think 1/8" white would be ok for the background? Would love to hear your thoughts.

1/8" SPINNA RACING
1/8" ACRYLIC, TY

PLACE PRINTING SUPPLY OF SPINNA ALONG TRACK AREA
1/8" SPINNA
1/8" SPINNA
1/8" ACRYLIC, TY

Smithfield Plantation
Col. William Preston
Blackburg
C. 1774

Built on what was then the edge of Virginia’s frontier, Smithfield Plantation’s architectural style is much as that of many plantations in Tidewater. The simple rectilinear and unadorned facade in clapboard siding is now open as a museum.

IMPROVISATION original detail conversation with fabricator; custom tracks
IMPERFECT REFLECTION subtle angle shifts in the plexiglass panels refract reflections
100 GREAT PLACES FOR THE PEOPLE, BY THE PEOPLE

VIRGINIA’S FAVORITE ARCHITECTURE
APRIL 10 - OCTOBER 19

OPENING RECEPTION
THURSDAY, APRIL 10, 6:30 - 7:30

10

BRANDING: exhibition identify + print publicity
Projected Bench-Merging Traditional Craft With CNC Processes

Cory Olsen, University of Arkansas

ABSTRACT

The intent of the Projected Bench is to explore a negotiation between traditional craft methodologies and CNC manufacturing through a lens of fine furniture. As our technological abilities expand and refine, David Pye’s conceptual ‘workmanship of risk’ increasingly diminishes into the ‘workmanship of certainty’ as we rely more on digital manufacturing. The craftsperson necessarily transitions from analog maker to digital coder, potentially alienating themselves and future generations from the innate, intimate material knowledge earned through handwork. Exploring precedents of digitally generated fine furniture pieces, the majority tend to exploit a single manufacturing method to a maximum degree. While doubtlessly innovative and impressive, given the accuracy afforded by our digital models a potential exists to combine multiple manufacturing processes into a single output. By integrating multiple methods the design can be liberated from the visual aesthetics of the singular process- the designer can elect to express or conceal the processes utilized. Free from the imposed restriction of a single CNC process, the exciting possibility of jig making also presents itself. In the formation of the Projected Bench, a Rhino model was first iterated exploring compound curvatures that would be difficult to create in a strictly analog environment. This curvature became the primary form of the bench base. Afterwards, the surface was manipulated in the parametric Grasshopper plug-in using an algorithm that divided the form into smaller three and four sided geometries. The parameter variables included the amount of subdivisions in both the longitudinal and transverse axes of the surface- even divisions resulted in symmetry and odd in asymmetry. Design fitnesses such as surface subdivision size and the meeting of the ground plane aided in the decision making process in selecting an iteration to move forward for prototype. To translate from digital to physical, the divided surface was conceived as a faceted solid achieved by CNC routing plywood scales.
Individually unique 3D printed tabs nested into routed pockets in the plywood scales and simultaneously set the unique angles necessary to create the overall curvature from planar solids. Each tab had an integrated clip along the center spine to securely hold a 3/16” diameter steel rod. Ultimately, the scale and tab assembly served as a welding jig and is absent in the final piece. Preserved, the jig presents the potential for multiplicity. The subdivided surface was then orthographically projected to the seat plane such that the top surface would have a direct relation to the form supporting it. A steel plate was laser cut with the large perforations- at 3/16” it is sturdy enough to prevent deflection when sat upon but thin enough to minimize the visual impact of the edge in profile. Mounted above the steel is a routed plywood top, contoured around the edges for seated comfort, and pocketed within the pattern perforations to create a lip to accept laser cut acrylic inserts. The pocketing of the plywood also serves to reduce the visual width of the top surface pattern, making the perception of the benches strength slightly more tenuous for the user. Through the acrylic one can peer through the seat surface and relate the top pattern to the spatial skeleton below. Two legs each consist of 12 CNC bent 1/8” steel rods. Each connects to the bench in a geometry that equally subdivides one of the surface facet profiles. To meet the ground, the twelve rods converge to a single foot via a 3D printed sleeve that captures six of the rods inside while the other six rest upon the sleeve rim. Continuing the ground connection, the curved base form also has four printed feet to serve as buffer between steel and ground. While heavily invested in CNC produced components, the bench invariably depended upon handcraft for its assembly, post-processing, finishing and ultimate success.
Surface logic evolving from compound curvature to faceted subdivision. Facets realized as routed 3/4” plywood scales, located by individually unique 3D printed clips.
Unique 3D printed clips set facet angles and have integrated clamps to secure 3/16" steel rods along their centerlines. Once assembled the steel can be welded to form.
The plywood scales included routed pockets to locate the individual printed clips, organized by a numbering system to ensure formal accuracy.
By parametrically controlling the quantity of surface subdivisions, a balance was achieved to formally retain the compound curvature while allowing for a workable facet unit size.
The elements of scales and tabs physically manifest into a full scale welding jig. Thus, the accuracy of the digital model was preserved and translated into built form while relying on an analog welding process. Welding the frame without digital assistance would be impractically difficult to attempt.
Once welded, the skeletal steel frame can be removed from the jig, allowing for the possibility of serial reproduction.
The plywood top is both contoured and pocketed. The accuracy of CNC manufacturing ensures the wood top will perfectly match a laser cut steel plate base. The pockets are sized to accept laser cut acrylic inserts, emphasizing the visual lightness of the piece.
The composite piece combines 3D printing, laser cutting, 3-axis routing, and CNC wire bending processes. Assembly was executed through analog means - reliant on craft knowledge in welding, woodwork, and surfacing/painting.
Soft Stones & Stones Table

Jeffrey Day, University of Nebraska
E.B. Min, Min Day

ABSTRACT

Inspired by everyday casual and natural geometries, the Stones Table and Soft Stones are sibling pieces in a furniture line – infrastructure for living & working – that recognizes our inherent desire to re-arrange space. Both products are composed of several pieces that can be combined into a solid, rectangular mass the size of a large coffee table, or dispersed, and even stacked in multiple ways. Both products work in domestic, institutional, and commercial settings. The Stones Table and Soft Stones are products of the same geometric algorithm - a centroidal Voronoi tessellation. Such tessellations are often used to model physical or biological forms, such as the cells in a leaf or certain types of skin cells. The unique form of each “Stone” derives from the relationship between the centroid, or generator point, in the mass and the edges that bound the space nearest to each point, according to simple Euclidean distance between the points. While the parametric model allows for infinite variability, practical considerations based on end-user needs and manufacturing procedures informed the final selection of shapes produced by the algorithm. Like rocks at the beach, or in a Japanese garden, the Stones Table is a puzzle-like table made of 6 separate odd-shaped components that combine into a single rectangular coffee table (guided by the Golden Mean) or separated and spread throughout a room. Construction: laminated, CNC-milled Baltic birch plywood with a variety of finishes on the top layer. Complex geometry creates interactive and playful seating. Soft Stones are a seating set with 8 unique components. When composed, the pieces nest to form a rectangular block for lounging. When separated, the individual pieces become moveable seats, stools or tables that can be arranged as desired. Soft Stones can be appreciated in the sculptural individuality of each component or the changing characters of overall form. Construction: welded steel cores with foam cladding and upholstery with French seams.
Inspired by natural geometries, the Stones Table and Soft Stones are sibling pieces in a furniture line – infrastructure for living & working – that recognizes our inherent desire to re-arrange space.

Both products derive from the same geometric algorithm - a centroidal Voronoi tessellation. The unique form of each "Stone" comes from the relationship between the centroidal point in the mass and the edges that bound the space closest to each point. While the parametric model allows for infinite variability, practical concerns based on function and manufacturing informed the final selection of shapes produced by the algorithm.
Both products: volumes and centroids (the number of points determines the number of component volumes).

Both products: move centroids 3-dimensionally to adjust internal faces.

Stones Table: round bottom edges

Stones Table: components CNC-milled and laminated from Baltic Birch Plywood.
Stones Table: option with plastic laminate top
Stones Table in a domestic setting
Soft Stones in an institutional setting
Soft Stones: 8 components with welded steel cores, foam, and upholstery with French seams.
STONES TABLE & SOFT STONES
The Iconic and the Everyday: Creative Finland in America

Peter MacKeith, Fay Jones School of Architecture and Design
Jonathan Boelkins, Jonathan Boelkins Architect

ABSTRACT

Creative Finland – Finnish architecture, design and industry – has been a strong presence in American culture, since at least the mid-twentieth century. The contemporary design relationships between the two nations are equally notable and worthy of illustration in the Embassy of Finland, Washington, DC, on the occasion of the centenary celebration of Finland’s independence. THE ICONIC AND THE EVERYDAY exhibition proposes an explicit condensed assertion of the contemporary presence and influence of Finnish design, industry and identity in the United States. Two exhibition displays are interwoven, each of which can be seen simultaneously as both “iconic” and “everyday” in character. The most clearly “iconic” is the distilled exhibition of the primary architectural works Finnish architects have contributed to American life, either in built form or in projected form; the built works by Eliel Saarinen, Alvar Aalto, Eero Saarinen and Mikko Heikkinen and Markku Komonen have also become part of the “everyday” life of those who inhabit them. The most clearly “everyday” is the exhibition of the objects, tools, furniture, and implements of Finnish design and industrial production that populate and activate the daily lives of American citizens – a density of Finnish identity often without any acknowledgement. But these objects, too, possess an “iconic” character in the clarity and purposefulness of their design. The exhibition ambition is to produce a composite understanding of the presence and strength of Finnish architecture, design and industry in the lives of everyday Americans – and to benefit both nations’ mutual appreciation and understanding. The installation components are lightweight, simply assembled, made primarily of wood, and suggestive of a landscape: a forested
shoreline, perhaps. The iconic images of architecture are organized and incorporated into four panels punctuating the sinuous rhythm of the installation cabinets and shelves. The everyday objects of Finnish design and manufacture are composed into both singular and serial displays of the actual things – available for both the eye and the hand. THE ICONIC AND THE EVERYDAY - in curated content, constructed installation, and desired reception - is “an architecture of diplomacy” at a condensed scale. The exhibition is both an act of design that advances an appreciation of architecture and design into the public realm and an act of service that advances understanding between nations through architecture and design.
The curved entry stair delivers visitors into a four storey space before passing into the two storey chancery space. Inside the chancery, the exhibition weaves gently back and forth in front of the glass wall and around the white structural columns. The corrugated form in plan makes the lightweight assembly self-stable without anchorage.
The exhibition layout is primarily composed of two basic vitrine types: a 10 degree and a 20 degree arced plan. When combined exclusively, the 10 and 20 degree arced vitrines form a complete circle as an alternate configuration. These primary vitrine type comprises 24 of 31 overall vitrines. Only seven secondary vitrines are used.

Designed to be flipped both front to back and top to bottom, this simple kit of parts allows a high degree of customization and flexibility in configuration, especially when the secondary vitrines types are interjected.
Whitewashed poplar columns sit between the vitrines, connected via 1/4" x 4" round aluminum standoffs. The standoffs mostly disappear, making the vitrines appear to float in front of the glass.
THE ICONIC AND THE EVERYDAY: Creative Finland in America
A Brief Guide to the Exhibition Displays

"The iconic and everyday" exhibition has aimed to be creative, suggestive and demonstrative—but is certainly not comprehensive on the range and variety of Finnish architecture, design and industrial production in the United States. These are many representative examples of the vitality of Finnish design in the USA and the curators would be pleased to hear from those who would like to be represented in further iterations of the exhibition.

1. A Aleksiina Piironen (Architectural Drafter): "Aaleksim's" is a significant national and international figure in the field of architecture. He is a well-known architect and his work has been recognized in the Nordic countries and beyond. His career has been marked by a strong commitment to sustainability and innovative design.

2. Log Cabin (Silvers): "Log Cabin" is a traditional Finnish dwelling, often associated with the history and culture of Finland. It is known for its simple, functional design and its ability to provide comfort and warmth in harsh environments.

3. The Song of Finlandia (Sala): "The Song of Finlandia" is a beloved Finnish folk song, often associated with the nation's spirit and identity. It has been performed and recorded countless times by artists from all over the world.

4. Fiskars (Oluja): "Fiskars" is a leading Finnish (and global) corporation, with a wide range of products from scissors to gardening tools. It has a long tradition of innovation and quality, and has been a major player in the Finnish economy for decades.

5. Angry Birds (Rovio): "Angry Birds" is a popular mobile game created by Finnish company Rovio Entertainment. It has been a global phenomenon, with millions of downloads worldwide.

6. Microsoft (Finland): "Microsoft" is a multinational technology company with its roots in Finland. It has been a key player in the global technology industry, with products ranging from computers to software.

7. Sisli (Olafur Eliasson): "Sisli" is a contemporary artist known for his installations and video works. His work explores themes such as light, space, and color.

8. Nokia (Finland): "Nokia" is a global telecommunications company with its origins in Finland. It was once the world's leading manufacturer of mobile phones, but has struggled in recent years.

9. Nokia (Pentti Taskinen): Pentti Taskinen was a key figure in Finnish design in the 1960s and 1970s, known for his innovative and functional designs.

10. Nokia (Eero Aarnio): Eero Aarnio was a leading Finnish designer in the mid-20th century, known for his innovative and colorful designs.

11. Nokia (Ismo Alanko): Ismo Alanko was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

12. Nokia (Kari Harjula): Kari Harjula was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

13. Nokia (Jukka Saarinen): Jukka Saarinen was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

14. Nokia (Jussi Nyberg): Jussi Nyberg was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

15. Nokia (Jukka Saarinen): Jukka Saarinen was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

16. Nokia (Jussi Nyberg): Jussi Nyberg was a leading Finnish designer in the late 1970s and early 1980s, known for his innovative and colorful designs.

The exhibition guide provides detailed information about the architects and products on display.
The Discovery Hub: A Place to Rest, Work and Explore.

Angela McKillip, South Dakota State University
Kay Cutler, South Dakota State University
Abby Dyk, South Dakota State University
Maria Swanson, South Dakota State University

ABSTRACT

Question. The question for this study is “in what way would processes of learning and teaching be modified and enriched if school culture welcomed the poetic languages and aesthetic dimension as important elements for building knowledge?” All too often, interacting with furniture is perceived as an ordinary occurrence. Utilizing the Reggio Approach as a catalyst for early childhood education, the design was to consider how this experience could enlighten and enhance the learning process. Though engaging in multi-perspective practice, design iteration and national product testing, theoretical underpinnings of initial prototypes were vetted, reconsidered and revised. Theory. Introduced by Charles Reigeluth in 1979, the Elaboration Theory states that content to be learned should be organized from simple to complex in order, while providing context in which subsequent ideas can be integrated. The Discovery Hub is an exploratory object for all parts of the classroom. It is a place to rest, work and explore; a place to build knowledge through discovery by given children opportunity to choose which concepts they want to elaborate on first. Rest. The Discovery Hub is comprised of two different seating heights. The upper 20” seat provides a standard anthropometric position while elevating the user to create hierarchy in the classroom. The lower 12” height is designed with a small child in mind, but also allows the adult to be at eye level with the children. When utilizing the lower seating height, the higher becomes a surface for documentation or activity within the classroom. Work. When the stool is flipped, the long dimension measures 28” creating a computer stand, lectern or another ergonomic work height within the classroom. The dry erase surface expands opportunity for classroom
communication and literacy development. Explore. The stool explores concepts of solid/void, implied shape, scale and proportion. The varying seat heights allow children to explore movement and elevation change. The perforated angle panel encourages passage, both with physical objects or surreal experience. The large open center encourages travel through, or a place of reprieve. A contrasting color scheme calls attention to unique elements within the design.

Provocation. Children engage their imaginations as they explore the Discovery Hub. Dramatic Play: The Discovery hub can be utilized in the dramatic play area for the base of many imaginative activities. It can be a house, fort, grocery store, vehicle, boat, a place for a puppet show, or many other creative uses. Construction: By adding balls and ramps, ropes, fabric, and other exploratory objects to the stool, one can create endless learning opportunities. Literacy: The dry erase board on the bottom of the Discovery Hub offers children a place to work on reading and writing skills. Reading: The Discovery Hub creates an elevated perch to read from during group time. Relation: The Discovery Hub is a great way to build learning interactions between student, teacher, and parents, such as adding and subtracting with blocks, or through exploring symmetry, gravity or other physical concepts. Process. The Discovery Hub was created in a unique faculty-directed research investigation, in collaboration with an on-campus laboratory school and industry partner. This process includes interior design students in multi-perspective design process, undergraduate participatory research, innovation, patented intellectual property and entrepreneurial endeavors through market immersion of prototypes. The design process explored the relationship between digital and physical construction methodologies. The piece utilizes 1/3 of a standard 4x8 sheet of plywood. Zero VOC paint, FSC certified wood and natural linseed oil assist in providing a sustainable and environmentally friendly asset to any classroom. The Discovery Hub: A place to rest, work and explore.
Discovery Hub

Hello!
Hola!
你好。
안녕하세요!
Ciao!
Hej! Salut!
Merhaba!
Apa kabar!
Question.
The question in focus for this study is “in what way would processes of learning and teaching be modified and enriched if school culture welcomed the poetic languages and aesthetic dimension as important elements for building knowledge?”

All too often, interacting with furniture is perceived as an ordinary occurrence. Utilizing the Reggio Approach as a catalyst for early childhood education, the design was to consider how this experience could enlighten and enhance the learning process. Though engaging in multi-perspective practice, design iteration and national product testing, theoretical underpinnings of initial prototypes were vetted, reconsidered and revised.
**Discovery Hub.**

**Theory.**
Introduced by Charles Reigeluth in 1979, the Elaboration Theory states that content to be learned should be organized from simple to complex in order, while providing context in which subsequent ideas can be integrated.

The Discovery Hub is an exploratory object for all parts of the classroom. It is a place to rest, work and explore; a place to build knowledge through discovery by allowing children to choose which concepts they want to elaborate on first.
The Discovery Hub is comprised of two different seating heights. The upper 20” seat provides a standard anthropometric position while elevating the user to create hierarchy in the classroom. The lower 12” height is designed with a small child in mind, but also allows the adult to be at eye level with children. When utilizing the lower seating height, the higher becomes a surface for documentation or activity within the classroom.

When the stool is flipped, the long dimension measures 28”, creating a computer stand, lectern or another work height within the classroom. The dry erase surface expands opportunity for classroom communication and literacy development.

The stool explores concepts of solid/void, implied shape, scale and proportion. The varying seat heights allow children to explore movement and elevation change. The perforated angle panel encourages passage, both with physical objects or surreal experience. The large open center encourages travel through, or a place of reprieve. A contrasting color scheme calls attention to unique elements within the design.
Provocation. Children engage their imaginations as they explore the Discovery Hub.

Dramatic Play. The Discovery Hub can be utilized in the dramatic play area for the base of many imaginative activities. It can be a house, fort, grocery store, vehicle, boat, a place for a puppet show, or many other creative uses.

Construction. By adding balls and ramps, ropes, fabric, and other exploratory objects to the stool, one can create endless learning opportunities.

Literacy. The dry erase board on the bottom of the Discovery Hub offers children a place to work on reading and writing skills.

Reading. The Discovery Hub creates an elevated perch to read from during group time.

Relation. The Discovery Hub is a great way to build learning interactions between student, teacher, and parents, such as adding and subtracting with blocks, or through exploring symmetry, gravity or other physical concepts.
Inquiry-Based
Multi-Perspective Practice
Industry Partnership
Reggio-Inspired
Participatory Research
Experiential Learning
Furniture Design

Process.
The Discovery Hub was created in a unique faculty-directed research investigation, in collaboration with an on-campus laboratory school and industry partner. This process also includes interior design students in multi-perspective design process, undergraduate participatory research, innovation, patented intellectual property and entrepreneurial endeavors through market immersion of prototypes.
The design process explored the relationship between digital and physical construction methodologies. The piece utilizes 1/3 of a standard 4x8 sheet of plywood. Zero VOC paint, FSC certified wood and natural linseed oil assist in providing a sustainable and environmentally friendly asset to any classroom.
The Discovery Hub: A place to rest, work and explore.
A Reggio-inspired object designed to construct knowledge through discovery and elaboration.

Rhythmic Space: Sound Reactive Projection Mapping for interactive environments

So-Yeon Yoon, Cornell University
Serena Lee, Cornell University

ABSTRACT

The power of today’s projection mapping technology allows new opportunities for designers to bring three-dimensional interactive experiences, which used to be available in a computer monitor and static screen, to the real environment. Design’s capacity to reshape the world is growing, enabled by advanced materials, tools and methods, and by cheaper, better, and easier-to-use computer technologies. This project explores innovative interior design ideas with the synchronization of audio and video via advanced interactive projection mapping technology. Rhythmic space consists of seven three-dimensional cubes (20”×20”×20”) showing 10 projection surfaces from the front. The cubes are made out of white museum boards and placed in the corner of a gallery space to create an interesting three-dimensional composition. The cubes mimic big ice cubes falling from above to look visually interesting and have good projection angles with multiple three-dimensional surfaces facing viewers entering the space. Themes--gradation, narration, art gallery, and dancing to music--were developed to represent explorative design ideas in unique scenarios for engaging, artistic, and playful experiences. The gradation theme uses cubes with gradually transitioning colors to create neon light effects. The narrative theme explores projection mapping as a communication medium incorporating human voice, text, and interactive gestures across multiple cubes. The art gallery theme proposes dynamic projection for simultaneous display of multiple contents showing student projects generated in the Visual Graphics and Visualization class. Dance to music is a collection of abstract visual effects that change more rapidly to upbeat music. Rhythmic space integrates interactive projection technologies for proposed design innovations in physical environments. Using open-source video...
mapping software (HeavyM) and a video compositing application (Adobe After Effects),
projection surfaces on the cubes become multiple and dynamic angled screens that show
interactive video contents reacting to music and sound in the room. A high-definition projector
and connected laptop computer are hidden under a bench on the other side of the gallery, near the
entrance. A microphone is placed in the room to capture volume levels and transfer the beats and
feeds to the computer so that the interactive cubes project images according to audio input. The
installation site does not have a window for daylight, yet there is a comfortable amount of light
with dimmed artificial lights inside and lights coming through the glass wall from outside the
gallery. The powerful visual effects attract considerable attention and traffic to the site.
Additionally, the work triggered many discussions among students and faculty around what and
how interactive projection technologies can reshape our everyday environments. While this piece
only adopted audio and video synchronization for projection mapping with four selected
applications, today’s advanced motions and emotion-sensing technologies, along with open-
source gaming software, offers unlimited possibilities for designers to transform spaces with
creative ideas and provide unique experiences for diverse users and purposes. The work explores
and suggests ideas that will lead to interior design innovation with emerging technologies and
will broaden the awareness among design students and designers on relatively new areas for
innovative design.
In the making
Rhythmic Space: Sound-Reactive Projection Mapping
for interactive environments
Design as Idea | Creative Scholarship

Finding Form

Stephen Skorski, Central Michigan University

ABSTRACT

There are many ways to create form. Influences can be environmental, theoretical or they may be based on secular or religious law. More recently, technology has taken a greater role in form generation as designers experiment with parametric design and computer simulation. Form can also be found. There are many instances of using found objects in art and architecture. Notable artistic examples include Robert Rauschenberg’s Combine paintings and Joseph Cornell’s boxes of assemblage. Within interior spaces we often see elements reused such as the Byzantine columns in the Basilica of San Marco in Venice and Greek elements in Roman temples. For this project, personal experience was the catalyst for form creation. Instigated by the designer’s travels, unique objects were found and digitally captured in three-dimensions. Ultimately, a piece of driftwood was selected as the item used to transform the experience of emotion, time, and memory into physical form. The created form relies heavily on three-dimensional (3D) scanning, 3D printing and digital manipulation software. Paradoxically, while modern techniques were utilized for the image capture and process work, ultimately the final form was constructed of clay – an ancient material used for millennia. Using a smartphone, in this case a Samsung 5S, an application was installed that “stitches” together a series of fragmented images to create a 3D digital file. This file was then manipulated within a variety of editing programs. For this series of experiments, the 3D image was captured by the application SCANN3D and Sketch Up Make was used as the primary software to transform the image. While there are other programs that will perform similar functions, these were selected because they are free and therefore easily available for others to experiment. Once captured and manipulated, multiple images were printed using a MakerBOT X15 3D printer. Of these, a preferred form was selected and a plaster mold was made of the 3D print. Multiple iterations of the object were then created using traditional slip casting techniques with additional sculpting after casting. The completed object was fired twice; once to
dry the clay prior to glazing and a second time for the final finish. Several different glazes were utilized as well as multiple firing techniques. It should be noted that it was not possible to scan an exact replica of the initial object. Each digital capture is affected by location, lighting conditions, and object scale. While the image is not perfect, its ultimate shape has been influenced by the conditions of the moment and this is of great interest to the designer. It is wonderful to realize that the image captured is unique to the time it was experienced and will unlikely be duplicated in its exact form again. In this way the technology itself becomes a powerful filter in creating a “memory” of the initial object. Like memories, an exact replica of the object is not the goal. It is preferred that the final object embodies experience by becoming a trace of the initial form.
Images for the “Finding Form” submission:

Figure 1: Final ceramic form, 6” high.
Figure 2: Final ceramic form – 3 views.

Figure 3: Slip cast mold and original 3D print.
Figure 4: Found driftwood.

Figure 5: Fragmented images of 3D scanned driftwood.
Figure 6: Wireframe view of 3D scanned driftwood after digital manipulation (detail).
FlowerWall: Leveraging the As-Built Prototype Model

Matthew Wagner, Virginia Tech

ABSTRACT

During the research and development process, it is often necessary to focus on specific design elements by way of prototyping. The relevance of the built prototype exists when demonstrating a proof of concept, during the evaluation and ruling of an idea’s validity, and as an iterative phase of research and development. My research investigates the development of responsive interior surfaces. The underlying goal is to design surface components that respond to localized parameters in effort to reduce distractions in the workplace. FlowerWall is a responsive interior surface designed to mitigate solar glare. The form is inspired by phototropic flowers; when direct solar radiation hits the screen, the flowers open to block the sunlight in effort to eliminate glare. Thorough research during the conceptual development phase was organized through the methods of data collection, sketches, and iterative models. However, the design for this prototype required a detailed understanding for its material assembly and mechanical components. Technical drawings represent a critical method of thinking that was required in order to procure the proper elements for fabrication. Within this realm of research, dynamic surface components are better understood through a method of representation that fosters the physical attributes of the design. The result of the iterative design process is a representation of concept, realized in the form of a prototype. This prototype represents a single module intended to be part of a larger array (modular screening system); however, funding only reached far enough to fabricate a single module. By leveraging digital technology, a representation of the current prototype can be made by way of the as-built model: drawings, diagrams, and visualizations. Designers are visual people both by process and by practice. In the case of FlowerWall, it is necessary to have a visual design representation that encompasses both the individual module, as well as an array of modules. If the end goal is to implement multiple FlowerWall modules on a project, then visualization will play a critical role in this method of design and discovery. The recursive process of methods of thinking
and methods of representation is what has helped to guide successful communication and decision making, as well as the garnered support of both colleagues and clients.
Embedyr: Furniture for the Changing Boundaries of the Modern Office

Amy Jacobson-Peters, University of Central Oklahoma

ABSTRACT

The workplace is an ever-changing environment. Today’s office provides many diverse opportunities from flexible work hours to working part-time from home. The latest statistics show that 2.8% of the non-self-employed workforce (3.7 million people) work at least part of the time from their home office (Global Workplace Analytics, 2017); this represents a 103% increase since 2005. Spending the workday at home however, is not the answer for everyone. Today's companies are looking for inventive ways to attract the best employees into the workplace. They want to provide office spaces that encourage productivity through a healthy and engaging environment. One way they are doing this is by allowing people to bring a part of home life to work - their pets. Studies have found that pets in the workplace help reduce stress, encourage communication and collaboration, and create opportunities for exercise throughout the day helping to increase productivity. U.S. companies permitting pets have grown to 7%, up from 5% five years ago (Noguchi, Y. 2016). Throughout history, animals have been an integral part of a thriving work environment. From herding sheep to plowing fields, many industries have relied on a successful relationship between man and animal to produce goods, grow food, or protect commodities. As work environments modernized, the use of animals as co-workers diminished, but today with a very diverse and generational workforce available, companies are looking hard at different types of "perks" that will attract and retain the best employees. Allowing pets in the office is an enticing option. Pet ownership is extremely significant in the U.S. with nearly 70% of all households possessing a pet (Henderson, S. 2013) In a survey conducted for this project, 98% of people polled considered their pets as members of their families, which indicates how important pets are to their owners and why the pet products industry is a vital part of the
In 2016, Americans spent $69 billion on their pets (American Pet Products Industry, 2016), an increase of over 25% from five years earlier. This creative scholarship entry represents a project that explores the design and construction of Embedyr, a line of sustainable, commercial workplace furniture that includes a desk and other office components that provide features to benefit employees who bring their pets to work. The name Embedyr (pronounced “Em-beh-deer”) combines the Danish word for office, "Embede," and animal, "Dyr." The style of the desk is a modern take on Mid-Century forms developed by many Danish and Scandinavian designers, and the desk configuration combines guidelines used for developing pet products with office workstation design. It offers unique storage capabilities for pet related items, areas for a pet to rest and retreat, places for a pet to explore, and the opportunity to secure a pet safely. All of these features, combined with a large work surface, built-in shelving, storage for paper and office supplies, as well as secure, discreet cord management, create a sleek, modern desk for the contemporary office environment. This project came out of extensive research exploring the idea of pet and people friendly furniture that was functional as well as aesthetically pleasing. An in-depth analysis of existing products as well as extensive observational research conducted with target market groups lead to the exploration of office furniture for the ever-changing workplace environment, an area that is untapped. Highly sustainable materials like Veria Ecoresin by 3Form and FSC certified Ash were used together in an interesting manner that can also be highly customizable. With the changing boundaries of the modern work environment, new challenges arise providing unique design opportunities. The Embedyr desk offers distinct features to employees who can bring their pet to work helping benefit everyone in a pet-friendly office.
Emdeyr: Furniture for the Changing Boundaries of the Modern Office

An early Mind Map exploring the guidelines for creating pet related products.
Early observational research watching how people and pets interact.
Sketches and ideation exploring multiple approaches like providing areas for retreat, ways to play and explore, and a wide variety of materials.
Refined sketches and sketch models that explore more residential solutions.
Based off of target market feedback, the design direction becomes more polished, and a line of pieces is developed using plywood with a geometric pattern routed out of the surface, and Varia Ecoresin 3Form as a framework for shelving.
After more feedback and consideration, it was decided that the desk would be the most effective direction to explore as it offered more unique opportunities for both people and pets, and office environment products had not been explored in the market place for accommodating pets. Work here shows an early rendering of the desk, a Mind Map, and further ideation refining the desk design.
The layered look of the 3Form and wood was inspired through Biomimicry, the desk's design was influenced by the earth's tectonic plates, and the way wild animals use the naturel caves formed over time as dens and perches.
Features of the desk include an elegant cord management system along the back that keeps cords away from animals that chew, as well as various accessories like file cabinets, additional shelving units for climbing, bed and pet food storage, along with bulletin boards.
Hand renderings and working drawings of the final direction for Embedyr. Drawings show some color studies along with different leg directions that were explored.
Digital 3-D models produced in Rhino and rendered in Key Shot show the final direction of the desk. The use of 3Form allows the desk to be highly customizable.
Design as Interior | Creative Scholarship

FLOCK

Jeffrey Day, University of Nebraska
E.B. Min, Min Day

ABSTRACT

Advanced timber construction has been a topic of great interest to the architecture and building industry due to its versatility and sustainable performance (carbon sequestration, renewability of resources, and so on). Conventional light timber frame construction relies on redundant studs and an abundance of “dumb” fasteners (nails). Much current research focuses on mass-timber construction using glue-laminated beams and cross-laminated timber; however, both of these systems depend on sophisticated manufacturing facilities and require significant amounts of adhesives. FLOCK explores an alternative post-tensioned system to support a free-standing timber wall using no adhesives, no fasteners, and relatively simple fabrication techniques. By combining the advanced geometric controls afforded by parametric software and standard production of repeated components, the project achieves formal complexity via simple means. FLOCK is a free-standing interior structure built to test the design and engineering of post-tensioned wood. Fitting within a 10’-0” cube, FLOCK transitions from a 10’-0” x 10’-0” square at the base to a 7’-0” diameter circle at the top with an opening on one side for entrance. The structure comprises a bolted steel base formed from a 4” wide-flange steel beam, stacked short lengths of 2x6 lumber, and a bolted steel tension ring at the top. Cables anchored to the steel base extend through slots in the lumber and are tensioned with swaged fittings above the top ring. The wood components consist of 2 types: a standard slotted 2x6 (in a limited set of different lengths) and a shaped 2x6 that projects into the space (called a “twig”). The installation is freestanding and does not require attachment or bracing to the existing walls or floor for stability. While exploring an alternative construction system, the project also challenges the expectation that the combination of advanced design computation and digital fabrication results in projects built with fine tolerance and high precision. Instead, FLOCK is a low-resolution construction designed with
high-precision software. The inherent looseness of the system permits the use of average or even low quality materials, allows significant room for error in the shaping and placing of wood parts, and yields an unexpected lack of control at the scale of the individual part, all the while providing evident control of the overall form. We consider FLOCK to be a response to two factors: 1. the computational associative design process used to derive the form and 2. the material and cost constraints we accepted as given. Thus, FLOCK is a reflection of self-imposed circumstances. The dynamic appearance of the built form reflects a conflict between the low-resolution and imprecision of material constraints (standard 2 x 6 framing lumber) and the high-precision of the parametric model and the degree of control it affords. Where precise control yields loose and imperfect formal results, an inversion of expectations occurs. The standard orthodoxy of digital fabrication tells us to expect narrow tolerances, refinement, and high precision allowing for increases in formal complexity. Instead, FLOCK inverts this understanding and produces a relatively loose and imprecise construction that still performs as required.
A CABLE-TENSIONED WOOD STRUCTURE WITH NO FASTENERS
STANDARD LUMBER SLOTTED TO ACCEPT HIDDEN CABLES

CONCEPT DIAGRAMS & CONSTRUCTION SEQUENCE
PARAMETRICALLY CONTROLLED 2x6 WOOD COMPONENTS & VARIANTS WITH “TWIGS”
FLOCK COMPONENTS: STEEL BOTTOM AND TOP FRAMES, S.S. CABLES WITH MARINE FITTINGS; SLOTTED 2X6 WOOD BLOCKS, 4 X 4 TEMPORARY SCAFFOLD TO SUPPORT TOP FRAME AND TENSIONED CABLES DURING ASSEMBLY PROCESS
PANELS
Friend, not Foe! Research, Ethics, and the Role of the Institutional Review Board (IRB) in today’s Interior Design Education.

Moira Gannon Denson, Marymount University  
Thea Scott-Fundling, Marymount University  
Hessam Ghamari, Appalachian State University  
Jill Pable, Florida State University

ABSTRACT

This panel discusses the issues of research, ethics and the role of the Institutional Review Board (IRB) in today’s interior design education. According to Augustin and Coleman in The Designers Guide to Doing Research: Applying Knowledge to Inform Design, “a good research project needs a plan. Without a plan, information gathering moves from an orderly march to a clear destination to a frantic and disorganized run through a baffling maze” (2012, p. 30). However, despite good intentions by educators to clearly guide their undergraduate and graduate students (and sometimes colleagues) through thoughtful research plans within the discipline, there are often misunderstandings and several competing opinions on the best processes for conducting sound design research. This panel will position this inquiry about what constitutes research and how we are assuring the welfare of the human subjects participants in our research at a time of recent updates by the U.S. Department of Health and Human Services (HHS) of the federal regulations for ethical conduct of human-subjects research. This panel will not attempt to be prescriptive of all IRB policies and procedures, as they vary from institution to institution, nor will it suggest research ethics scenarios are complete and lack contradictory information. Each situation and each human subject group is unique! Rather, this panel seeks to provide the audience a summary overview of relevant IRB regulations and implications for the application process, plus discuss
the changing federal mandates impacting IRB structures. The goal is to bring informed context to individual faculty who are navigating and building supportive interior design research protocols at their own Universities. Panel members represent faculty from both public and private institutions and will address lessons learned from their varied research experiences working with human subjects in providing small to large scale support through the IRB process for design research. The panel will invite attendees to participate in rich discussion around several emerging questions: • What is research and what is not in regard to design programming? • How should we structure the schedule of the thesis or dissertation development and design research to accommodate IRB timeframes? • How could researchers address the human subjects protection and estimate the time of review approval? • What issues surround students’ defense of their prospectus without having IRB approval completed? Whether this panel’s audience member is a seasoned design researcher questioning the risks to the human subjects involved in their own research or their concern is gathering lessons to help guide thesis students through an evidence based design research project plan, this panel intends to build a friendly discourse focused directly of the health safety and welfare of the public.

REFERENCES


Designing Our Own Way: Research Methods for Makers

William Riehm, University of Louisiana at Lafayette
Annie Coggan, Pratt Institute
Jean Edwards, University of Louisiana at Lafayette
Jean Edwards, University of Louisiana at Lafayette
Alexa Winton, Pratt Institute

ABSTRACT

In an era where “fake news” and “alternative facts” have become a new currency of ideas and perception, designers find themselves in a special and specific place where, as makers, our work leads to real things. A chair can be sat on, a room can be sat in, and a textile can be touched. Doing this design work well requires preparation, and that preparation is research. As educators we know that teaching research methods is critical to nurturing good designers, but what specific ways can designers approach research methods (particularly in a time where facts are so easily questioned)? What are research methods specific to design? Are we even able to say that we have disciplinary specific methods? Recent investigations in interiors have covered a broad range of emerging research methods in design, including ethnographic (Vaux and Ryan 2016), experiential (McGoldrick 2016) and through performance (Odom 2017). This panel embraces these methods that might break from “traditional” qualitative and quantitative methods of the technical and human sciences – perhaps engaging a set of methods of our own. Other methods include learning through making, primary source investigation of site experience, and the phenomenological investigation of the aesthetic experience. Various perspectives on research methods will be presented and discussed by those who do this work, integrating their methods into real curriculum through thesis advising and instruction in research methods. The panel will consist of educators from public and private schools and graduate and undergraduate programs from both urban and
rural settings. It is our intention to launch a conversation about enlightening and optimistic strategies for design research education for the future.

REFERENCES


Leveraging Interior Architecture and Design’s Expertise to Help Hurricane Victims Move Forward

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Dana Moody, University of Tennessee at Chattanooga

ABSTRACT

The 2017 Atlantic hurricane season has been one of the most destructive in recorded history. Combined damage estimates for Harvey and Irma total $180 billion, exceeding even the highest estimates for the unprecedented damage caused by hurricane Katrina in 2005 (Amadeo, 2017). With widespread devastation in Texas, Florida, Puerto Rico, and the U.S. Virgin Islands, many U.S. citizens are facing a long road to recovery. Given the level of devastation, it is imperative that all responsible citizens, especially those in the design professions, consider their role in the recovery efforts. Social responsibility has been identified as a key indicator of interior design’s professional status (Anderson, Honey, & Dudek, 2007), and interior designers possess a skill set that uniquely qualifies them to contribute to natural disaster relief efforts. Hurricanes of this magnitude dramatically impact regions and communities, but also have a profound effect on the individuals involved. Interior designers have the potential to contribute greatly to the rebuilding of communities and lessen the psychological and social trauma that results from forced relocation that is inevitable for many individuals impacted by these storms. On a community level, the destruction of newer developments often brings to the forefront the need for the adaptive reuse of surviving structures in which the scope of work is largely interior. The preservation of existing buildings, many of which carry cultural significance, can be a means of helping preserve a sense of place within a community that has lost so much, while the exploration of new uses helps the community adapt to its changing needs. As seen in the Franz Building project in post-Katrina New Orleans, this can also be a very effective method for teaching students about sustainable and socially-responsible building practices (Hoeferlin & Seidman, 2009). Interior designers also play...
a critical role in the reestablishment of “home” after someone has lost everything. Fullilove (2013) documents the “root shock” that occurs when one is forced to relocate. Jackie Sardie, a Louisiana native transplanted to Houston after Hurricane Katrina, captured this feeling when she said, “We’re just sick, suffering so bad over, not the loss of our houses, but the loss of our home…” (Saulny, 2005, p. 15A). Interior designers should continually seek out new ways of promoting that feeling of “home” that becomes so precious for someone recovering from extreme loss and devastation. This panel consists of design professionals personally affected by hurricanes and/or involved in relief efforts. It seeks to bring together diverse points of view to create an inclusive dialog regarding the role of interior architecture and design in hurricane relief. Panelists will discuss the unique issues surrounding the current relief effort, lessons learned from past relief efforts, and how sense of place and place attachment theory can add value to the rebuilding/resettling process. Each panelist will share their unique perspective, and the panel will promote participation by attendees in hopes that collaborative research and projects will be spawned as a result of this discussion.

REFERENCES


Fullilove, M. T. (2013). The frayed knot: What happens to place attachment in the context of serial forced displacement? In L. C. Manzo & P. Devine-Wright (Eds.), Place attachment: Advances in theor


Beyond screens, designing for social interaction through digital technologies and experiential spaces.

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Clay Odom, The University of Texas at Austin
Saleh Kalantari, University of Houston

**ABSTRACT**

Along with the swelling emphasis on designing branded interior environments (Kibler & Waxman, 2016), especially in the technology corporate sector (Gensler, 2016), there has been a rise in the call for designing experiences as a part of interior design. Designed around a “palette of places” (Lohr, 2017) workplace environments are focusing on creating meaningful and unique interactions through a series of experiential spaces aimed at enhancing community engagement and experience. From dynamic screens to interactive pixel walls, and dynamic motion graphics, responsive technologies and experiences are becoming standard components of interior design with many design firms such as Gensler offering services in digital brand design and experience design. As organizations continue to view space as an important recruitment and retention asset, experiential environments which leverage innovative environmental brand graphics, interactive experiences, and a range of immersive technologies to engage employees continue to be in high demand. Considering the CIDA Futures report (2014) calls for students to apply innovations in materials and technology to design solutions and to consider interior spaces as part of system of spaces (p.8), it is increasingly critical that we are developing interior design students’ fluency in designing experiential and interactive environments as a part of their core knowledge. Given that digital media are the emerging new material for interior environments, how are we responding to this demand for designing immersive, interactive, and technologically driven experiential interior environments in studio education? Method Building on the call for more scholarship on the integration of graphics as a building element in interior design education (Ventura & Tibbitts,
2017), this panel offers three diverse perspectives on integrating digital technologies and experiences as a key building element and material in interior design education. Perspectives will examine what it means to design experiential environments through continuum of interactions from low tech to high tech including surfaces, spaces, and sensors. The focus is on teaching students to think about digital and communication technologies as a dynamic building element that can be integrated in human-centered design. Outcomes Drawing on industry practices and informed by interior futures, the panel presentations will conceptualize methods, approaches, and opportunities for preparing interior design students to design for interactive and experiential environments. Drawing on both practice exemplars and implemented projects in studio education, this panel identifies the current landscape of experiential design and how to position our students to be leaders in advancing experiential interior design. At the boundaries of several disciplines including interior design, human computer interaction, environmental graphic design, and communication, the panelists offer strategies for identifying collaborators and expanding knowledge at the intersection of digital technologies, experiential design and the built environment. Advancement of Design Knowledge Moving beyond placing screens in spaces, emerging environments from workplace interiors to public environments are focused on providing users with immersive experiences. As interior design educators, we dedicate time to teaching students to be nimble with emerging technologies to visualize, communicate, and represent their ideas. We spend far less time equipping students to design for digital experiences as part of interior design education. This panel aims to collaboratively create a vision for how to teach, engage, and develop scholarship to advance our thinking of designing for meaningful interactions with emerging technologies and materials in interior design. This panel is of value to not only educators who teach studio but also courses on materials, color, and technology.

REFERENCES

Ventura, R., & Tibbitts, S. & (2017). Graphic materiality: teaching graphic design as building
element. In Amy Crumpton (Ed.), Interior Design Educators Council National
Conference. Des Plains, IL.
**What is the assessment method used to advance interior design students into upper level coursework?**

Sally Ann Swearingen, IDEC, ASID, IIDA  
Alana Pulay, Oklahoma State University  
Amy Cox, Harding University  
Amy Roehl, Texas Christian University  
Elizabeth Pober, Colorado State University

**ABSTRACT**

This panel will investigate the impact of interior design assessments in the advancement of undergraduate students into upper-level interior design coursework. In a preliminary survey, ten different universities required some type of assessment to determine if students would advance. Out of the ten, all but one required a portfolio review of projects to either assess the student’s skill level or ability to advance in upper-level coursework. One university has changed its direction to requiring a design scenario to enter the capped upper-level interior design program. Is there a new direction on the horizon for selecting students into the upper-level courses? “Given that the purpose of the portfolio review is to assess a range of competencies that have been achieved during the semesters, it is usually formatted to contain a wide range of artifacts as evidence of such achievements (Crowther, 2012). Models, drawings, written papers, projects normally provide an avenue for students to display and exhibit one’s accomplishments. A portfolio is a purposeful collection of students work over a defined duration of time that includes content selected by the students, selection criteria, merit judging criteria and evidence of self-reflection (McDonald, 2011). This panel comprised of professionals from six diverse colleges within the six different universities. The goal will illustrate different and similar issues that will reveal patterns and differences between universities that are accredited by the Council for Interior Design Accreditation (CIDA). Some universities are required to cap their numbers while others
work at weeding out those students who do not illustrate the skills necessary to become an interior designer. In conclusion, other universities will have a chance to hear the different formats utilized and reflect on their personal evaluations used. The discussion will allow participants to determine if changes are on the horizon or if limitations or opportunities need to be made with their assessments.

REFERENCES

McDonald B. 2011. Portfolio assessment: Direct from the classroom. Assessment and Evaluation in Higher Education, 23 February (iFirst)
So Many Terms, So Little Time: Searching for Best Practices in Teaching Interior Design History

Valerie Settles, University of Central Oklahoma
Melissa Santana, Northern Arizona University
Sarah Wilhoit, Harding University

ABSTRACT

Courses that teach history of interior design offer an alternate method of learning to the predominantly studio-based curriculum of the typical interior design undergraduate degree. Unfortunately, many students struggle with poor grades and short attention spans in these courses precisely because of the lecture-based format, and may not fully appreciate how historical precedent can be integrated into studio projects. This is where the role of the instructor becomes critical to helping students understand: (a) how to predict future trends by understanding what has already been done; (b) how a community’s cultural heritage is represented in historical designs and how to retain that identity in projects; and (c) how this knowledge will help inform design decisions leading to a richer portfolio. However, what students may not realize is how challenging instructors find this subject, and often for the same reason as students; the lecture-based format forces the instructor to invent opportunities to apply knowledge during the class, and requires hours of preparation to develop and deliver appropriate content for each class period, with added pressure to keep sleep-deprived students engaged. Because information in interior design history courses meets several indicators established by the Council for Interior Design Accreditation (CIDA, n.d.) within the standards of Global Context, Collaboration, Human-Centered Design, and of course History and Theory, it is vital that students fully understand and are able to integrate content communicated in this portion of the curriculum. Due to the challenging nature of delivering relevant and engaging content to students who are often more concerned with perfecting a studio project for an impressive portfolio piece than the social and
political context of the Arts and Crafts movement, instructors who teach these courses continually strive to find the most effective technique to impart their knowledge. Scholarly articles discussing foolproof pedagogical methods have yet to be written, but some offer options while also underlining the importance of continuing to try to help students understand how historical precedents can make their designs richer and more relevant. For predominantly studio-based curricula, teaching history as a memorization exercise is not an effective way to communicate content; applying “inquiry-based” techniques such as problem-based learning to integrate critical thinking with more abstract “historical thinking” skills provides instructors with an opportunity to teach students to interpret information to solve a problem (Carrasco & Martinez, 2016). Cunningham (2014) discussed the importance of teaching context and the role of history knowledge in developing “more socially engaged spaces” while having the power to “alter the ways in which students design.” A thematic approach proposed by Brandt (1998) encouraged students to explore “conceptual, aesthetic, and technical” themes that allowed them to find “commonalities within and across …categories” that they can then take into the studio to better inform their design solutions. Similarly, a precedent study conducted by King (1998) “addressed the theoretical basis of … movements and illuminated significant social, economic, and political issues.” These were then integrated into a studio project that required students to design a piece of furniture with “thoughtful adaption of [historical] precedents.” These examples indicate the variety of techniques that demonstrate the creativity exhibited by instructors striving to teach history courses in the most relevant and engaging way for their students. This panel proposes to discuss best practices for teaching history of interior design courses to provide a platform where everyone can share problems and solutions. Ultimately, both students and faculty will benefit from learning effective teaching techniques for this unique, but critical, element of interior design education.

REFERENCES


Wickedness, Millennials and the Undergraduate Thesis:
Strategies for Structuring Independent Design Research

Roberto Ventura, Virginia Commonwealth University
Helen Turner, University of Kentucky
Susie Tibbitts, Utah State University

ABSTRACT

Motivation In many undergraduate interior design degree programs, an year-long independent senior thesis or capstone studio sequence, in which students research a design issue and develop a design response to it, is the signature educational experience. This exploration often follows a two-semester structure. In the first, students focus on the articulation and research of a specific design issue, the selection of a project site, and the formulation of a responsive design program (Figure 1). Following the successful completion of this groundwork, students in the second semester then develop a design project in relation to that foundation (Figures 2 & 3). For interior design undergraduates, this experience is often their first attempt at formulating a project at scale. A primary role for faculty is to usher the student through these individual developments of and responses to a wicked problem, as articulated by Rittel and Webber (1973). The tripled requirements of the first semester—research, programming, and site articulation—would present a daunting challenge to seasoned researchers. As design students focused on practice, as opposed to research, this wicked task can be overwhelming. Complicating this process are the issues related to millennial learning behaviors. Hosek, et al, write that millennial students respond best to frameworks that provide structured creativity (2016). Educators, being content experts, are skilled at providing these guides in syllabi and project assignments. However, the open-ended character of independent design theses present the exact kind of work with which millennials struggle most (Head & Eisenberg, 2010). Twenge (2006) adds that in precisely these types of
wicked problems, student decision-making becomes cloudy and their parsing of layered systems labored. McAllum notes that educators develop and design new pedagogical methods to facilitate the processing of complexity. However, “these interventions all revolve around what we, as good teachers, do, not what students might achieve without us (2016).” For interior design instructors in these senior thesis sequences, the question of how to structure the experience is acutely significant. Providing students with too little structure, and the risk of floundering increases. Overstructuring the experience, as McAllum asserts, threatens to replace “helicopter parents with helicopter professors (2016).”

panel structure A geographically diverse panel of instructors involved in two-semester senior design thesis sequences will engage in a discussion focused on strategies for guiding students through this wicked process. Each instructor will first provide an overview of the requirements outlined by their institution for the thesis, offering an opportunity to compare and contrast curricular structures. Following this, instructors will present their deployment models of this curriculum, with particular focus given to how faculty usher students through the four major components of the thesis: research, programming, site articulation, and design execution. This discussion will be supported with examples of teaching materials and student responses. At the conclusion of this initial orientation, examples of completed thesis deliverables will be presented for discussion. Following this overview, panelists will engage in discussions focused on effectiveness of the pedagogical frameworks employed, again discussed in relation to the four major thesis components. As the thesis projects mandate engagement with independent research and open-ended investigations, particular attention will be given to student successes and struggles in these areas. Ultimately, the panel will present methods interior design educators might employ to combat the millennial need for affirmation and benchmark completion (McAllum (2016) that an inherently wicked exploration like a senior thesis may refuse to yield.

REFERENCES


POSTERS
Investigating the impact of multi-sensory environments on behavior for Veterans with dementia

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Sheila Bosch, University of Florida

ABSTRACT

Background: Elders with dementia are in desperate need of non-pharmacological behavioral interventions to benefit their quality of life (QoL). People living with dementia have difficulty adapting to environmental stresses, which can lead to behavioral and psychological symptoms in dementia (BPSD). Inability to adapt to environmental stress may lead to psychosomatic distress caused by decreased ability to regulate sensory stimulation, described in the Model of Imbalances in Sensoristasis (Kovach, 2000). Most BPSD in nursing homes occur during times of bathing assistance, making it an area of critical concern. Despite recommendations that non-pharmacological interventions be exhausted first, antipsychotic medications are often utilized (Schellhorn, Barnhill, Raiteri, Faso, & Ferrando, 2009) with dangerous side effects. BPSD may be reduced by interventions supporting sensory equilibrium like Multi-sensory environments (MSE) (Kovach, 2000). Typical MSE elements include bubble tubes, color-changing LED lighting solutions, music, fiber optics and aromatherapy. MSE positively impact behavior for people with dementia yet there is an overall lack of empirical studies indicating a strong need for research on the topic (Lorusso & Bosch, 2016).

Problem: The Veteran’s Health Administration (VHA) has implemented MSE as BPSD therapy since 2010 and has not yet systematically evaluated its impact. The purpose of this study is to understand barriers to uptake and staff perceptions of MSE and to investigate its impact as a non-
pharmacological BPSD intervention for Veterans with dementia. The goal is to help calm Veterans with dementia during assisted bathing through a human-centered, multi-sensory environment, customized to the sensory preferences of the Veteran. The long-term goal is to partner with the VHA to improve the design of MSE in dementia-care facilities to benefit the QoL of Veterans.

Methods: This is a mixed-method study including interviews with VHA staff implementing MSE at 53 U.S. dementia-care facilities to understand barriers to uptake and staff perceptions regarding MSE. Also incorporated into the research is a 20-week observational intervention study of twice weekly bathing sessions for up to 8 Veterans with dementia by up to 15 healthcare providers following the single-case experimental research design (SCRD) method using the multiple baselines across participants design to investigate the impact of MSE on behavior during assisted bathing. National ClinicalTrials.gov Identifier: NCT03303638.

Analysis of Outcomes: Telephone interviews with VA staff will be recorded for analysis using data analysis software, (NVivo) looking for common themes and major insights regarding barriers to uptake and staff perceptions regarding efficacy of MSE. Observational study will collect behavioral data during assisted bathing at baseline and MSE intervention phases. Both baseline and intervention sessions will follow the Bathing Without a Battle (BWAB) behavioral guidelines and definitions adapted from the Care Recipient Behavior Assessment (CAREBA) to code observations (Sloane et al., 2004). Secondary data will be the perceptions of participating VA healthcare providers regarding the effectiveness of the overall MSE intervention, collected via interview after the completion of the study. All research and data storage procedures have undergone rigorous review and approval from the Veterans Health Administration and IRB01. Participant and data security and confidentiality will be carefully safe-guarded.

REFERENCES


Learning Spaces in Higher Education: Supporting Interdisciplinary Problem-Based Learning in An Emerging Campus Model

Mary Johnson, Florida State University Department of Interior Architecture and Design
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ABSTRACT

Purpose
This study intends to open a dialogue on structuring an integrated campus model that breaks down university silos and provides students with physical learning space needed to support interdisciplinary communication and experiential learning. This study will explore the following three disciplines: Visual Arts and Design, Technology and Engineering, and Business and their interactions in problem-based learning scenarios. The skill to collaborate between disciplines is vital for workplace success and employers are striving for new graduates to show this expertise. Understanding the commonalities of how different disciplines interact can lead to better support in the built environment and encourage communication between disciplines. The purpose of this research is to understand how students and educators of different disciplines engaged in problem-based learning communicate and transition between the key learning behaviors: acquire, reflect, collaborate, and experience (Gensler 2015).

Background
Traditionally, higher education learning environments were designed as places of instruction characterized by long corridors, separation of faculty and students, and academic departments in
the form of silos (Leather & Marinho, 2009). Presently, educational theory has focused its purpose on prompting students to be active learners where collaboration and knowledge construction are key elements. The process of problem-based learning is the guiding framework for this study as it directs students to construct new knowledge collaboratively, while developing self-directed learning skills to creatively solve problems. Through these learning steps, identify problem, gather research, hypothesize solution, apply new knowledge, and evaluate solution, students become acquainted with the process of knowledge creation in the professional work force (Hmelo-Silver, 2004). Research is desired to support active learning behaviors during problem-based learning in an interdisciplinary environment. These learning behaviors provide a platform to connect how students gain knowledge socially and behaviorally to inform innovative interior design solutions.

Method
This quantitative research study utilizes a survey distributed to a Research One University that determines the learning behaviors of the previously mentioned disciplines during problem-based learning pedagogy. The survey prompts educators to identify which learning behaviors are present within each problem-based learning step, and the rank of importance within that process. This portion of the survey recognizes the learning behavior patterns that are existing within each discipline, that is further analyzed using descriptive statistics to compare percentages of learning behavior activity. The second portion of the survey begins to identify design features that each discipline deems important within each learning behavior, such as, space organization, technology, furniture organization, and space adaptability. Understanding interior design element preferences in each discipline clarifies learning behavior support in the built environment.

Findings
The survey data was analyzed using descriptive statistics to reveal interior design elements that support the transitions of learning behaviors not only for specific discipline’s needs, but to create better synergy in the interdisciplinary, experiential learning process. Although the disciplines differ in core knowledge, the data divulges nuanced similarities in learning behavior patterns during the problem-based learning steps, and differences are revealed in space characteristics. This research will uncover the common behavior transitions and built environment characteristics that encourage and support interdisciplinary collaboration. Conclusion The results of this study intend to decode how educators of multiple disciplines facilitate the experiential learning process–informing innovative guidelines for interior design to support interdisciplinary
REFERENCES


Linking public health, heritage work, and the interior

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ABSTRACT

Relevance / Problem
The human experience of interiors relies on knowledge of the past. The organization, contents, and use of interiors have been linked to specific health concerns (e.g., indoor air quality, physical activity levels). Further, the cultural read of interiors and related material culture objects demonstrates values, meaning, and identity. Is there a relationship between interiors as past, interiors as health, and interiors as values? A previous review of preservation and public health literature revealed minimal discussion about the ways health and heritage are connected. This presentation reports the second phase of the literature review narrowly focused on interiors and material culture.

Context
We recognize our past—history and heritage—as crucial to who we are (Grenville, 2007; Kölbl & Konrad, 2015). Significant regulatory and social effort is expended in protecting places, buildings, and behaviors that link us to this past. Tangible representations of the past (e.g., objects, buildings, landscapes) are preserved as reminders (Riegl, 1903/1982). Free association with heritage is recognized as a fundamental human right. Widely varied opinions suggest history, heritage, and historic places are valuable assets for improving the human condition. Evidence for how history and heritage improve human lives is mostly indirect or anecdotal. If we accept that connections to the past are important for human existence, what connections exist between individuals’ knowledge of their own history and measures of public health? More directly, do the choices individuals make to retain interior and material culture objects benefit their health?
Method
Topical and general database searches for literature linking preservation and public health produce surprisingly few relevant results. While characteristics of traditional communities and settings are often discussed in the public health literature, none of the reviewed literature explicitly suggests a relationship. Similarly, no identified preservation literature recognizes public health per se. Yet, we readily use assertions about identity and meaning in describing sense of place, interior design choices, and holding on to old things (see Ekerdt & Baker, 2014).
Expanding beyond the previously completed literature review, this presentation examines otherwise oblique connections between literature about interior objects, meaning and identity, and public health issues. Literature for this second phase was identified through targeted, topical exploration of literature in varied disciplines (e.g., anthropology, gerontology) and scanning reference lists. Relevant claims are compared to a working definition of public health (Dannenberg et al., 2003).

Outcomes
The broad literature follows similar characteristics to the first-phase review. Characteristics of the respective issues are represented across the literature, but direct connections between the ideas are seldom called out with specificity. Causative relationships are rarely established. The literature broadly advances a philosophical position that human well-being is linked to perceptions of identity and value supported by interior and material culture objects. Advancement of design knowledge The lack of direct literature linking preservation and public health provides an opportunity for targeted explorations of how our individual understandings of the past are connected to our health and well-being. One part of this relationship may be solely intellectual and based on individuals’ perceptions of self. The other part is connected to the physical environments used and valued by these individuals. Understanding of the health benefits of self-recognized identity and heritage will provide designers with new ways to link designed space with users’ cultural and individual values. This information sheds new light on the desired relationships humanity has with its places and things.

REFERENCES


A Case Study of Place Attachment in Senior Cohousing Communities

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ABSTRACT

Place attachment is a group of feelings that emotionally bind a person to a place (Eshelman & Evans, 2002). Place attachment has implications for well-being and psychological benefits such as belonging, enjoyment, connection, and privacy (Scannel & Gifford, 2017) which has special importance for older adults. After retirement, older adults generally spend more time at home, building a collection of memories of that place (Afshar et al., 2017). Place attachment has been dissolved into five different dimensions by Raymond, Brown, and Weber (2010) including Nature Bonding, Friend Bonding, Family Bonding, Place Dependence, and Place Identity. The purpose of this study was to examine the presence of older adult’s place attachment in comparison of urban and rural senior cohousing communities. This study analyzed similar and contrasting design features that assist place attachment. Both communities in this study are located in the Midwest of the United States. The rural community was opened in 2012 and has 24 households. The urban community, one of the first senior cohousing communities in the country, opened in 2007 and has 16 units. 24 older adults participated in this study: 10 participants from the rural community and 14 from the urban community. Participants attended individual interviews where researchers asked questions related to place attachment and design features that affect their experiences in the senior cohousing community. Interview questions were developed based on those used by previous studies (Hidalgo & Hernandez, 2001). Open-ended questions gave participants the opportunity to share relevant information. Interviews were audio recorded, transcribed, and coded using the computer software NVIVO. Descriptive statistics summarized
the gathered demographics, and a list of mentioned design features were deduced from NVIVO. Importance was determined by the number of residents that talked about the design feature. Relevancy was gathered from the number of times the design feature was mentioned by any participant throughout the duration of the interviews. Between both communities, 6 design features were mentioned by 50% or more of each the senior cohousing communities. The Common House Dining Room was associated with the place attachment dimensions of Friend Bonding and Place Dependence; the Individual Home Front/Courtyard Porch design feature was associated with the dimensions of Friend Bonding and Place Identity; the Individual Home Large Windows was associated with the dimensions of Nature Bonding and Friend Bonding; the Individual Home Back/Street Porch was associated with the dimensions of Nature Bonding, Place Dependence, and Place Identity; the Common Garden was related to the dimensions of Place Dependence and Nature Bonding; and the Common House Hearth Room was associated with the dimension of Friend Bonding. Among the rural residents, additional 5 design features were considered important and relevant for place attachment: Sidewalks System, Clustered Mailboxes, Clustered Parking, Common House Guest Rooms, and Individual Home Kitchen. Among the urban residents, 3 design features were identified: Common House Kitchen, Common House Media Room, and Individual Home High Ceilings. When comparing the rural and urban communities, the design features that were more prevalent in the rural community focused more on community and guest aspects (Friend and Family Bonding) and natural elements within community (Nature Bonding). The urban location however, had design features that were associated with functionality (Place Dependence), relationship between residents (Friend Bonding), and the natural elements surrounding the community (Nature Bonding). This analysis could be beneficial for future senior cohousing community development to determine important design considerations. In addition, this research could be used for evidence-based design of any older adult facility.

REFERENCES


The Role of the Saudi Arabian Mosque in Preserving Culture and Enhancing Community Connectedness.

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ABSTRACT

Introduction:
Globalization is a phenomenon that has affected most aspects of modern life including architecture and the built environment. The globalization of Saudi Arabia’s cities following the discovery of oil in the 1950s has led to massive urban modernization and standardization of the built environment, including the congregational mosque (Ebensaleh, 1997). Many scholars argue that modernization has created cities which lack architectural identity and fail to meet social values and cultural needs. This study explored how the changes in the design of the Saudi Arabian mosque following the discovery of oil have impacted the sense of community in modern residential neighborhoods.

Background: Place identity plays an essential role in establishing a bond and sense of belonging between a community and its residents. The meaning attached to a place, along with the emotional connections to it, help promote a positive place experience for users. The ability of places to successfully incorporate opportunities for socialization can contribute to the formation of place attachment (Altman, 1992). The congregational mosque serves many functions including providing a place for ritual prayers as well as provide a gathering place for the residents. The needs of the community must be identified and met in order for the mosque to function well as a communal place (Gabr & AbdelGalil, 2016). In Saudi Arabia, the congregational mosque acted as the main community center in residential neighborhoods prior to the discovery of oil. This discovery led to increased wealth and an access to and desire for building types that are not
traditionally Saudi. As a result of these changes, the design of congregational mosque and the way it functions has changed (AlSoliman, 1991). This raises the question about the continued role of the congregational mosque as a communal gathering place and bedrock of social interactions and community building among residents.

Methods: To better understand this phenomenon, a mixed-method research approach was taken to explore the role of the contemporary mosque. First, a survey was designed to answer questions on Saudi residents’ current use of the congregational mosque, their social relationships with neighbors, and the sense of attachment to their neighborhood. The survey was sent to the employees of the Royal Commission for Jubail City, Saudi Arabia, and 325 responses were received. In addition to the survey, eight interviews were conducted with members of the Farouq mosque in Jubail Industrial city to collect information on the users’ experience with the mosque.

Findings: The majority of survey responses (312) were from men, which is due to the higher percentage of men in the workplace in Saudi Arabia. Seventy percent of survey participants are regular mosque attendees who visit the mosque daily and 78% attend the Friday ceremony weekly. Six themes emerged in the analysis of data related to the research questions: social interaction between residents of the local neighborhood, neighborhood attachment, the use of the mosque today, the mosque as a social gathering place, the mosque’s role as a community influencer, and the mosque’s architecture. Statistical findings showed a positive correlation between the length of residency and the number of people users can identify by name in the mosque, and between the number of people one can identify by name in the mosque and the sense of attachment to the neighborhood community. Positive correlations were also found between length of residency and how often residents visit the mosque as well as their sense of attachment to the neighborhood community.

Conclusion: A sense of community between a neighborhood’s residents can be strengthened through thoughtful design and planning of the neighborhood mosque so that it supports social interaction of residents.

REFERENCES


Reaffirming a Sense of Place Through Local Branding

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ABSTRACT

Purpose
The purpose of this project is to provide a design solution within a local historic building. This project intends to explore the role local branding plays within a location’s sense of place and how it impacts the community’s identity and feeling of place attachment. The final solution will be the design of a hospitality, food and beverage, venue tailored to the needs of the local users and their desire for a sense of place.

Background
There was a time, about 70 years ago, when all it took to be successful in business was to make good quality products. However, as competition grew the need to distinguish between high-quality and shabby products became essential. Fundamental brands, still in existence today, were some of the first companies, in the 1950s and 1960s, that characterized the kind of forward thinking that is ubiquitous today. The idea of branding grew out of the standardization of quality products in the middle of the 20th century. This shift required that companies develop a new way to differentiate themselves from competitors. Marketing was approached differently and therefore, required an understanding of the target customer (de Swaan Arons, 2011). The connection the brand forms by understanding the consumer offers not only functional, but also emotional value. Over time, the emotional value would form a lifelong relationship making top brands household names throughout America.

Method
The research is a qualitative study which examines how a sense of place can lead to the creation of a local brand. This method includes a one-hour focus group study, which is comprised of members of the Savannah Chamber of Commerce and primary stakeholders in the community,
including brokers and architects. Three distinct branding packages were developed and utilized for the research. The brand package designs are founded on theory adapted from Kwon’s (1998) four principles of sense of place as outlined in the literature review. The brand categories used can be referenced in table 3.1 in the appendix. The focus group study will be conducted in Savannah, Georgia in order to encourage the participation of community stakeholders. Members of the Chamber of Commerce were chosen because the objective of the Chamber of Commerce is to drive community development and public policies that promote sustainable growth and to improve the economic environment of the community. The survey questions asked in the focus group address the site location, building type, space function, fare, and pricing and how they are informed by the four principles of sense of place: criticality, authenticity, site-specificity, and inclusivity. The focus group method allows members of the group to interact and influence each other during the discussion and consideration of ideas and perspectives. The focus group allows the participants to interact, influence, and be influenced by the opinions of others.

Findings
The research obtained through the focus group study was analyzed by the researcher through the use of qualitative data. The audio portion of the study was transcribed using Macspeech Scribe software, and allowed the researcher to revisit and glean data from the discussion portion of the focus group study. The questionnaire responses were coded by the researcher and analyzed against the four principles of sense of place. The data identifies that participants gravitate towards designs that reflect a human touch and craftsmanship, however, there are nuance differences in the general perception and application of the brand packages. Common themes which emerged from the study informed design guidelines that will help the researcher to create a local brand for a food and beverage hospitality environment that supports sense of place.

Conclusion
The results of this study have the potential to positively impact hospitality design to better accommodate a community’s need for sense of place.

REFERENCES

de Swaan Arons, M. (2011). How brands were born: a brief history of modern marketing. The Atlantic. doi:10.3897/bdj.4.e7720.figure2f
GAME-BASED LEARNING (GBL) APPROACHES AND INSTRUCTIONAL CHALLENGES IN INTERIOR DESIGN STUDIOS

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ABSTRACT

CHAPTER 2. GAME-BASED LEARNING (GBL) APPROACHES AND INSTRUCTIONAL CHALLENGES IN INTERIOR DESIGN STUDIOS Modified from a paper published in AIGA Design Educator’s Conference Proceedings 2016 Zina Alaswad Abstract The pedagogy of design studios has been a topic of change and controversy in design education due to interdisciplinary influences from fields such as educational technology (Ku, 2016). Despite the current and continuous adaptation of instructional and educational technologies in a variety of educational fields, design education seems to be one of the late adopters. Current studies support the need for further research into the dissemination of knowledge from fields of educational technology to other disciplines such as design and engineering (Nelson & Annetta, 2016). This 36”x48” poster uses graphics and textual information to summarize and illustrate a framework that identifies gaps in the traditional interior design studio pedagogy and addresses these gaps using a game-based learning (GBL) approach within an activity system theory. Design education that is based on the master apprentice model has proved to be problematic over the years, especially in terms of the structures of studio courses and how they affect student time management posing challenges to both educators and students (Belluigi, 2016). This research reviews a significant body of literature from 1980 until today, identifying and discussing critical instructional issues in the interior design studio structure. To ground this research in theory, I have adapted an activity system theory perspective which defines the studio-based learning environment is an activity system that incorporates a sense of community, actively engaged participants, and activities (Engestrom, 2014). The activities can be categorized into those requiring physical skills such as
construction and artistic expression, and those requiring cognitive skills such as communication and inquiry. GBL as a pedagogical approach can provide a structuring framework for these activities while increasing students’ engagement, extending lines of communication, and enhancing decision-making processes. Game based learning has broken the monotony of traditional education and proved to be a successful pedagogical approach to learning and teaching. It has been shown to result in better attitudes towards learning, increase student motivation, fosters higher-order thinking, and impacts decision-making processes (Kapp, 2012).

Within design studios, game-based learning can be employed to help students in several ways. Using clear rules, goals and taking advantage of GBL’s adaptability as an approach can help students acquire skills to develop strategies for time management and workload distribution. It can also help them understand the complex and intertwined processes of a design project without the immediate need for the instructor’s presence. This aids in overcoming the reliance on the master-apprentice model through incorporating clarified learning outcomes, needed scaffolding and timely feedback. Game-based learning may also equip design students with ability to conduct sophisticated analyses to overcome issues of ambiguity in evaluation criteria through clarifying goals, expectations, and learning outcomes. In conclusion, this GBL framework can benefit design educators who are interested in implementing innovative pedagogies in their studio environments while following an activity-based system for the intended actions and tasks. The affordances of the game-based learning approach along with the structure provided through the activity system theory fits well into design studio environments where a balance is required between the systematic and the creative aspects of the design process.

REFERENCES


Theoretical framework in Interior Design Literature between 2006 and 2016

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ABSTRACT

The scope of interior design research is broad and diverse due to its inherent multidisciplinary nature: ID researchers write articles on subject areas ranging from housing to lighting to environmental behavior. Given this diversity, researchers publish their studies in a wide range of journals - some focused primarily on interior design (“ID Specific Journals”) and others focused primarily on diverse subject areas, but where interior design scholars find opportunities to publish their research (“Non-ID Specific Journals”). This has led to a fragmented body of knowledge in the interior design field. In addition to fragmentation, assessment and analysis of the body of knowledge remains sparse in the discipline with the following notable exceptions in the Journal of Interior Design (JID). Assessment of the body of knowledge is necessary from time to time to gain trend insights as well as to identify future research topics. Thus, the purpose of this study was to review theoretical framework in interior design articles published across six influential peer reviewed journals between 2006 and 2016. The six journals were identified through a survey sent to IDEC members regarding readership and publishing of interior design scholarship. This study examined all original interior design scholarship published in Journal of Interior Design (JID), Interiors: Design, Architecture & Culture (IDAC), Housing & Society (H&S), Journal of Family & Consumer Sciences (FCS), Journal of Architectural Planning & Research (JAPR), and Environment & Behavior (E&B). This study presents an extensive review of the total 355 articles during ten years of interior design literature published across the six prominent journals listed above. To determine which articles to code and analyze from the four non-ID focused journals,
the researchers began with a review of interior design definitions and outlined a definition for the purpose of the study. Once the universe of articles was determined, the researchers recorded theoretical frameworks which has been investigated for ten years in six journals. The internal reliability among researchers was 89.86%. Among the total 355 articles, only 26 articles (7.32%) are developed from theoretical framework. In other words, very limited articles has explored theoretical framework and made implication to them. JID (18.27%) had the highest percentage of articles developed from theoretical framework among the selected articles for this study than other five journals (see Table 1). For ten years, 30 different theoretical frameworks have been investigated by researchers. Majority of them have been cited as a single reference across the six journals, but Person-Environment Fit, Stress Recovery Theory, Attention Restoration Theory, Perry Scheme, and Mehrabian and Russell Model have been cited twice for ten years across the six journals. The finding indicates that theoretical frameworks have been explored by very limited articles, and this has been acknowledged as a concern among interior design researchers for several decades. One of the limitations of this study is that it considered six journals and did not consider publications outside of these journals - thus, the sampling provided a narrower picture of research in relation to the discipline. Therefore, an area of future study could include review of interior design literature in additional influential journals, citation analysis of interior design literature, and continued periodical assessment of the literature for the benefit of scholars, institutions and the interior design discipline.

REFERENCES

Understanding LED’s Color Temperature Preferences Amongst Millennials and Baby Boomers

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ABSTRACT

This research examines how light affects people’s perception of interior space as it relates to the elements of color and materials. Each element changes a person’s impression of the overall space, thus the application of light’s correlated color temperature (CCT) alters perceptions of the interior and may affect individuals’ behavioral and neural responses (Amor et al., 2015). Given rapid changes in lighting technology, current lighting design practices should be reevaluated through in-depth, human-centered investigations. Today, designers are faced with creating spaces that incorporate a wide range of users spanning from Millennials to Baby Boomers. This research explores if these generations have different perceptions and preferences of light’s CCT. Are preferences for artificial light’s color based on childhood experiences, as Marietta Millet (1996), would suggest? Baby Boomers have mostly lived with warm-colored incandescent light. Millennials grew up with a prevalence of cool-colored compact fluorescent or LED light. However, the use of technology and handheld devices, emitting cool-colored light, has increased in both demographics; does this current experience impact lighting preferences? As people spend more time indoors, do they seek a stronger connection to nature through cool CCT lighting? In designing lighting layouts, designers often leverage calculations and standard metrics, however
this neglects the human factors of emotional response and visual perception. This research presents a computer-based survey with 30 participants, 16 Millennials (b.1982-2004) and 14 Baby Boomers (b.1946-1964), conducted in person on a controlled computer. Four material palettes, based on industry research, were photographed under four CCTs (3150K, 3500K, 4000K and 5000K) of LED lamps with consistent CRI and lumen output. The survey format, based on research from Flynn et al. (1979), randomly showed each set of 4 palette images with supplemental spatial context (open office, hospitality, healthcare, restaurant) and asked participants to indicate preference (see Appendix 1). Overall, results from this study are in stark contrast to current lighting CCT conventions. Though metrics guide lumen output based on functions, there are no standards for CCT selection, allowing personal opinion to influence design decisions. Office interiors are primarily illuminated with 3500K or 4100K light (IES, 2011), however results reveal that both generations prefer 5000K CCT (see Appendix 2). Across both hospitality and healthcare material palettes, participants also prefer cooler CCT (see Appendix 3 & 4). Restaurant palette data does not indicate one preference, however over 35% of both generations prefer 4000K CCT (see Appendix 5). These results suggest that despite generational differences, both prefer cooler CCT. Since 5000K resembles daylight, and is most preferred in this study, participants may be seeking a connection to nature and improved sense of well-being (Kaplan and Kaplan, 2011). Although preliminary, data suggest designers should evaluate current lighting approaches in commercial interiors and consider transitioning to lighting with 5000K CCT. With new understandings of the interaction of light, color, and materials and generational preferences, designers are positioned to improve the experience of interior environments through lighting design.

REFERENCES


Perceptions of senior cohousing in China

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ABSTRACT

The population of the elderly is rapidly increasing in China. The 60 years and older population is projected to reach 34.6% by 2050, upward to 480 million (Zhai, 2015). Ensuring that these older adults have the optional housing and community they need to enjoy high-quality, independent lives has thus become a major issue for the Chinese in the twenty-first century (Chen & Powell, 2012). Traditionally, family has provided for the basic care and companionship of their elderly. However, due to rapid urbanization and the one child policy, the structure of the conventional support system is quickly changing. The vast majority of the elderly population currently lives alone and lacks the physical and social support formerly provided by family (Li & Chen, 2011). It has been estimated that much of the China’s housing inventory lacks the basic accessibility features. Along with housing challenges, aging brings an even greater risk for isolation. The cohousing concept reestablishes many of the advantages of a traditional community but within the context of twenty-first century life. This model affords mutual support and a sense of belonging to the residents. As well as the advantages of community living, senior cohousing is also designed with basic accessibility features that help older adults live safely and comfortably in their homes (Durrett, 2009). Despite the nationwide awareness of its potential benefits, limited research on this subject has been pursued. The ecological theory of aging (Lawton & Nahemow,
1973) enabled this study to recognize individual capability, social factors, and environmental elements working together to meet the needs of older adults and enhance their well-being. This study examined participants’ demographic characteristics, evaluated their general view of long term retirement housing and services, and assessed their perceptions of senior cohousing formation and desirable design features. The participants consist of 75% females and 35% males among 397 participants, ages 50 or over with a structured, self-administrated online survey in Chinese. The age composition of the survey participants are predominantly represented (75%) by older adults ages between 50 and 59. Vast majority of the survey participants (89%) are married. Majority of the participants (61%) had completed higher education. In this study, the average household size is 3.14 (SD = 0.74). Aging in place was the preference of the majority of participants (58%), while a senior cohousing was an attractive option for a quart of participants. The top three amenities they preferred in retirement housing were full bathroom, full kitchen, and living room beside bedroom. When considering the most important community amenities, participants selected hospital, walking paths/outdoor space, and public transportation. Light housekeeping, transportation, and outside maintenance were selected as the top three services they would prefer. For the recruitment method of senior cohousing community members, ninety-two percent of participants indicated that they preferred recruiting among friends or acquaintances, rather than recruiting people by signing up on a list publish on newspaper or social media. Seventy-one percent participants indicated that they would consider government programs for land requisition, while thirty-six percent indicated that they would find support from real estate developer. Majority participants (61%) indicated that they would prefer to live in a senior cohousing community with less than twenty households. Majority of participants selected walking paths/outdoor space (89%) and flower/vegetable garden (67%) as the most critical amenities for senior cohousing complex. The findings of this study may provide useful information for senior community planning, assistance with senior-friendly housing
developments, and aid to design effective senior housing with close social relationship and accessible accommodations.

REFERENCES


Role of the Physical Environments in Supporting Residents of Care Facilities with Dementia: A Review of Literature

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ABSTRACT

Dementia is a devastating condition for those afflicted and affects family members and caregivers. Behaviors prevalent in a person suffering from dementia include aimless walking, aggressive behavior, and other issues such as having hallucinations, extreme anxiety, and persecutory ideas. Behavioral problems associated with dementia include language difficulties, agitation, verbal outbursts, and memory loss. According to Hoe et al. (1998), aggression can take place when a person feels threatened, abandoned, or in an area with no familiar people or the place is unfamiliar. Wandering can take place when a person is in search of the familiar. Dementia is an important aspect of the human condition that calls for special design considerations in the living environment to encourage and support independence and overall well-being. Studies have shown that the characteristics of care environments directly affect dementia patients' quality of life by reducing their level of stress (Sloane et al., 2002). With therapeutic environmental design, environments can be created with consideration to the limited capabilities of individuals with dementia, and design elements can be included to assist residents in adapting to their environment, increasing their well-being and daily functionality (Day, Carreon, & Stump, 2000; Day & Calkins, 2002; Tilly & Reed, 2008). This study presents a critical systematic review of the literature on evidence-based physical environmental design and
examines their implications for creating a therapeutic environment that support and improve the quality of life of residents with dementia. This review includes the studies that (1) used quantitative, qualitative, or mixed research methods, (2) addressed the impact of physical environments on health of residents of care facilities, (3) recruited participants from residents of a long-term care facility. The data on study objectives, study methods, outcomes, interventions and results were extracted from all included studies were organized and compared using a standardized data sheet. Next, the environmental design attributes as well as their impact on the quality of life of residents of care facilities were investigated. The review identified the role of supportive environmental attributes of care facilities including wayfinding, outdoor environments, social environments, lighting, and color. It is obvious from this study that there is a growing body of knowledge to support the impact of certain physical environments on the life of resident in care facilities. The matrix of the findings of the study represented the health outcomes relevant to the environmental attributes of care facilities. The findings indicate that well-designed physical environments play an essential role in supporting residents with dementia and improve their quality of life. It was suggested that designers are presented with credible research evidence to address design decision for care facilities environment. The findings of this investigation would be beneficial for interior design practitioners, healthcare designers, and researchers to address attributes/elements of dementia care facilities.

REFERENCES

EVOLUTION OF DEPTH IN ACCESS TO NATURE IN HEALTH CARE ENVIRONMENTS

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ABSTRACT

Access to nature in healthcare spaces has changed throughout history. This study discusses the evolution of physical and visual access to nature from Abaton in Epidaurus to patient centered care in twenty first century, and envisions the future changes in healing environments. Historical events, scientific discoveries and theoretical frameworks are responsible for changes in physical and visual access to nature. Some contexts and theories as industrial revolution, positivism, territoriality, and scientific discoveries has marginalized the importance of access to nature, Other contexts and theories as mind-body connection, phenomenology, sensory stimulation, and prospect refuge has paid special attention to access to nature. This presentation studies and analysis the depth and number of transitions in connection to nature in seven major phenotypes, Abaton in epidaurus, roman military hospitals, medieval hospital gardens, pavilion hospital, moral treatment models, Monoblock and patient centered care. Isovist results suggest that depth size and levels of transitions in connection to nature keeps changing in these seven major healthcare phenotypes. In summary, exploring the examples in this study suggests that there has been a full circle from the short access path to nature in Abaton in Epidaurus to providing roof gardens and atriums for better visual and physical access to nature in patient centered care in twenty first century, also this study suggests that short transition depths to outdoor natural environments will be the next step in designing healthcare environments.
A Case study of two office spaces in Augusta, GA

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ABSTRACT

The aim of this study is to investigate two current office spaces and to explore how the environmental characteristics of those spaces and their usage affect employees’ satisfaction with their work environments. The two small office spaces are located in a historic LEED certified building. One of the offices is used by an engineering firm and the other one is used by a real estate development firm. The office spaces are located on the first floor of the building, and they share a hallway, conference room, and a kitchen with the other office spaces on the same floor. Schiavon and Altomonte (2014) collected data from over 21 thousand office occupants using an online survey developed by University of California Berkeley, Center for the Built Environment. We used an adapted version of their survey to collect data from the office employees. Schiavon and Altomonte (2014) found that occupancy satisfaction in office buildings are correlated with environmental factors such as indoor air quality, lighting, building features, as well as personal characteristics, and work-related variables. Lee and Brand (2005) examined the effects of distractions, flexible use of workspace and personal control over the work environment on perceived job performance, job satisfaction and group cohesiveness. They (2005) found that more personal control over the physical workspace (e.g., adjustment) and easy access to meeting places led to higher perceived group cohesiveness and job satisfaction, and distractions may have little influence on self-rated performance. Lastly, Veitch et.al. (2007) found that satisfaction with privacy, lighting, and ventilation/temperature are related to job satisfaction. Using the post-occupancy survey from CBE as explained above, we collected data on lighting, acoustics, thermal comfort, air quality, visual privacy, and satisfaction with office furniture. Two employees from each office space were interviewed using the survey as a guide. We also collected data from
observations, still images, sketches, and walk-throughs of the spaces. During the observations, we collected data on the usage of the space, employee interactions and distractions. We will discuss our findings with the help of still images, employee testimonials, and the existing body of literature, and we will present design solutions to some of the design problems found in the two spaces. For example, our findings indicate that noise, quality and design of furniture, glare, access to thermostat, disagreement on indoor air temperature among employees, poor air quality, and motion-sensor lighting were listed as some of the problems related to the office space. This case study provides a glimpse into actual work environments and employee perceptions of the work space in a historic LEED certified building.

REFERENCES

Improving the Experience of Visiting a Retail Exhibition through Interactive, User-oriented Interior Design

Foroozan Danesh Zand, Art University of Tehran

ABSTRACT

Purpose
There is a significant relationship between the physical properties of display galleries and the affective qualities of visitors’ experiences (Franz, 2005). Studying this relationship empirically can help us to develop better design criteria for displays. While a number of researchers have addressed this issue in conventional built environments, not much work has been done to analyze how people use and respond to displays that incorporate digital and interactive components (Biagi, 2005; Jumisko-Pyykkö et al., 2008). One study found that the visitors’ responses to digital displays were quite different from their designers’ intentions (Meyboom, Johnson, & Wojtowicz, 2011). These concerns are very relevant to digital showcases directed at shoppers, which seek to create a specific kind of engaged communal experience (Sharji, Peng, & Woods, 2013). While the use of new technologies has the potential to make the shopping experience more attractive and compelling, it is vital to carry out rigorous research to determine if the designers’ objectives are actually being achieved. This study contributes to the design literature by analyzing the way in which shoppers interacted with a digital retail display, and then developing suggested form alterations based on this analysis.

Method
The study was executed in three phases: behavioral mapping, data-driven scenarios, and adaptive form exploration. In the first phase, a qualitative observational method (Lincoln & Guba, 1985) was used to analyze the behavior of people facing a temporary retail station in an electronic/computer shopping mall. The observational study measured how often the display
components were touched, the average amount of time that shoppers spent interacting with the display, the average amount of time the shoppers spent communicating with retail representatives, and specific shopper responses to design elements such as light, physical components, and branded components. In the second phase of the study, interaction scenarios were developed based on the analysis of the observational study. These scenarios are proposals for specific ways to enhance the human-to-human and human-to-object interactions that take place around the display, and to better encourage the spread of information and interest in the products being marketed. Finally, in the third phase, new digital forms were created to implement the interaction scenarios.

Outcome and Relevance
The observational study led to a range of specific conclusions, including (a) more open portions of the display tended to hold shoppers’ attention for longer periods of time, (b) specific lighting patterns tended to be more effective in drawing attention, and (c) crowded conditions during rush hours led to a smaller proportion of individuals stopping to interact with the product. The new scenarios and forms that were developed to enhance the display included a more open floor plan, more unpredictable display dynamics, and a greater use of three-dimensional components. The forms proposed to implement these scenarios were simulated using the Grasshopper/Rhino software platform. The results from this study indicate how empirical research can be used to analyze and improve the effectiveness of a retail display space so as to enhance shoppers’ interest in learning about a product.

REFERENCES

Understanding Knowledge Collaboration: Healthcare Management + Interior Design

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Robert Rados, Southern Illinois University

ABSTRACT

Although ancient in idea, research into the connectivity of nature and healing has a seminal basis, in contemporary history, with the 1984 publication by Roger Ulrich which examined the recovery of patients after gall bladder surgery. The study examined the use of window views (those of a natural scene verses a scene viewing a brick wall) and the impacts to healing and pain management needs. Related work such as the text “Ecotherapy: Healing Ourselves, Healing the Earth” examined the role of nature as a prescribed treatment plan for mental and physical wellbeing (Clinebell, 1996). While not all research seeks to explore the connection of nature to human health and healing environments, the movement of evidence-based design has coalesced over the past quarter century into formalized entities such as the Center for Health Design, which defines itself as “…passionate healthcare designers and professionals…dedicated to improving the quality of healthcare through design of the build environment” (Center for Health Design, 2017). The CHD oversees a certification program known as EDAC (Evidence-Based Design Accreditation and Certification) which targets multiple disciplines (architecture and design, healthcare providers, hospital executives, product manufactures, etc.) in an effort “to develop a community of certified industry professionals…” (2017b). As Peter Lippman expressed in his text on evidence-based design for learning environments, “…the design professional may [need to] reposition…from an artist to an academic and intellectual who is rigorously working toward resolving issues that extend beyond an aesthetic… (2010, p. 6). The demand to reshape knowledge collaborators at multiple levels (professional and academic) in a variety of built...
Typologies is more tangible in the 21st century than perhaps at any other time period. This poster will present the emerging research of two university academics from the fields of healthcare management and interior design as they pursue understanding on how best to “bridge the gaps” of pedagogical experience for students seeking to become healthcare management professionals and interior design professionals; traditionally two very distinct silos of learning. Diagrammatic matrices will be utilized to visualize the current points of professional interaction (planning, implementation, assessment) that can occur between healthcare managers and interior designers. Survey responses from current industry professionals in both fields will also be analyzed to examine where breakdowns in communication, understanding and awareness may be occurring in practice. The efforts of these first research steps will be to illuminate possible interventions of community building and knowledge collaboration for pedagogical application as well as within professional practice.

REFERENCES

Biophilic classroom design features: analysis of special educational teachers’ perception

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

ABSTRACT

Natural characteristics such as light and vegetation are often viewed as critically important elements in built environments. Research identifies that an interactive relationship between human beings and nature is essential to health, but can present challenges in designing indoor environments. To provide people with opportunities to connect with nature, biophilia, defined as the innate human tendency to focus on life and lifelike processes, can be applied in the built environment (Wilson, 1984). Numerous research studies have concluded that nature impacts not only physical health but also psychological well-being, social relationships, and mental functioning (Kaplan, 1989; Ulrich, 1984). Ulrich’s often cited study reported that surgical patients with a view of nature were hospitalized for a shorter period of time than those who had a view of brick wall (1984). Specific studies have shown that biophilic design elements enable people to live and work in healthy spaces with less stress and high productivity in healthcare facilities and learning environments (Browing, Ryan, & Clancy, 2014). The focus of this study was understanding the impact of biophilic features for learning environments accommodating special needs students in South Korea. Students with special needs are a category of learners that require specialized learning spaces, as governed by a series of legislative acts and more than half of Korean students who require special education study in special classrooms at traditional schools. General research identifies that special needs students’ behaviors are positive when they interact with nature outside, but few studies explore the impact and meaning of biophilic elements within classrooms, where these students spend most of their time. It is reasonable to suspect that
Biophilic elements in special needs classrooms might contribute to students’ enhanced well-being and positive behaviors. Moreover, this study explored the differences between the effects of biophilic design in traditional schools on both special and non-special needs students, as both student types are present in schools that have special needs classrooms. This quantitative/qualitative study gathered data through an online survey and follow-up interview that gathered 44 South Korean middle school special education teachers’ perceptions and experiences of their students’ behaviors concerning biophilic elements. Survey and interview questions were based on the WELL Standard Guidelines’ biophilic requirements of environmental elements including lighting, spatial layout and furnishings. A 98% response rate was achieved. The participants responded that in order of importance, daylighting, window views, and interior vegetation greatly affected their students’ emotional health (See Figure 1 in the attachment). Over 50% of the participants said that daylighting is the most impactful to special needs students of the provided elements (See Figure 2 in the attachment). Teacher participants also reported that biophilic design should be applied not only in special classrooms but also common areas and general learning environments. As for a question about the differences between the effects of biophilic design on both special and non-special needs students, participants felt that non-special needs student might have a milder sensitivity than special needs students, but nature still benefits them. Generally, the findings support the use of biophilic principles in schools for the support of special needs students’ health and behaviors. The PI will conduct voice chat interviews to gather further data in November for the study, and the final cumulative findings will be reported in this poster at the March 2018 conference.

REFERENCES

Zero-Fall Patient Room - An Evidence-Based Approach to Designing a Hospital Patient Room

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Homa Pesarakli, Texas Tech University
Debajyoti Pati, Texas Tech University

ABSTRACT

Objective: The aim of this design project is to propose a hospital patient room layout that reduces the possibility of patient falls based on evidence in the literature. Background: Patient falls was reported by the Joint Commission (2015) as one of the top occurring incidents in hospitals; which imposes lots of cost on the healthcare system and can cause serious injuries that sometimes leads to death. Patients fall for a variety of reasons. The falling risk factors are categorized into intrinsic (e.g. medicine use, visual impairment) and extrinsic (e.g. lighting, flooring, grab bar). Since a broad range of factors associated with falling, a multifaceted approach is needed to extract the evidence in the literature.

Method: An evidence-based approach was undertaken to (1) define environmental factors that lead to patient fall, (2) recognize operational procedure to deliver health care, (3) define patient’s family needs. Several quantitative and qualitative studies were collected which investigated patients’ outcome and patient fall prevention strategies in a hospital setting. Based on the evidence in the literature, several analyses were conducted on a standard patient room layout in order to define a baseline. The proposed designed layout was compared with the baseline to evaluate the performance of the proposed solutions. Among four general types of hospital patient room, this study focused on the inboard-footwall room which defined as a patient room with bathroom beside corridor and on the footwall. The four sets of conducted analysis are: ambulating
between bed and toilet, view to patient’s head from nurse station, view from patient bed (visual access to the bathroom, window, and family area), postural variables (such as turning, grabbing, pushing, pulling, etc.).

Results: The findings from the literature review can be categorized into four themes: (1) patient room configuration, (2) bathroom configuration which focuses on the relative location of toilet, sink, and door, (3) nurse station location and visual access to bed, (4) redesigning furniture and medical devices (e.g. IV pole, overbed table, door). Accordingly, a design was proposed that compare to the baseline condition, can reduce patient fall, increase both patient and patient’s family satisfaction, and improve nurses’ performance.

Conclusion: There are lots of design recommendations in the literature which try to mitigate the number of fall incidents, however, more investigation from ergonomic perspective is needed to obtain a profound understanding of the role of environment. The proposed design tried to reduce the probability of falling by avoiding maneuvers that dangerous postures (such as turning, grabbing, pushing, pulling, etc.) should be involved in.

REFERENCES


Exploratory study: Human perception towards Color integrated with Light and Materials

Kyoungmee Kate Byun, University of Louisville

ABSTRACT

Issue In indoor environment, color is the significant factor to affect emotional and psychological reactions in humans. Color is also important as a visual component to represent designers’ intention related to interior ambiance. Despite its significance, deciding color scheme to represent the design intention is still challenging for practical application for the real environment. The problem occurs with transition from two-dimensional color chosen to three-dimensional color applied. Without the consideration of integration of color, light and materials being covered to the objects in a space, three-dimensional rather than two-dimensional, it is hard to explain the emotional effects of colors in humans and how it relates to a designer’s desired intention in the space (Poldman, 2009).

Purpose The purposes of the study are 1) to understand transition process and differences between two-dimensional color chosen and three-dimensional color applied 2) to address human perception toward the color integrated with light and materials being covered to three-dimensional objects in a space 3) provide the practical framework for empirical research on the relationship between human emotion and the integration of the three for future application.

Methodology Colors do not exist as single entities. It is essential to examine carefully the different images delivered by variations in hue and tone. Thus a focus group consisting of six professional interior designers deduct color options from a chosen paint manufacturing company’s color palettes for feelings of warm and cool and then carefully select two colors that best present feelings of warm and cool for indoor environment via an interactive examination process. Those two colors from a chosen paint manufacturing company’s color palettes will be used in the experiment and integrated with light and materials (Mahnke, F, 1996). In this study, controlled empirical experiments will be conducted in the interior design lab of a mid-western
university. Two opposite colors, to represent feelings of warm and cool, are selected by a focus group to examine the controlled settings by different choices of integrated surroundings such as the comparison of two different materials covered with two different settings of lights; warm versus cool. Real physical settings have two separate warm and cool light sources settled in the lighting fixtures and it will be used for this experiment. Also, three partition walls surround this physical setting so there is no consideration of natural light. Colored wood and steel three dimensional objects will be placed on the bottom of each setting based on two colors; feelings of warm versus cool. Voluntary university student subjects will be recruited; 60 subjects will be selected to participate in an anonymous experiment and answer Likert scale survey questions. No identifying information will be collected. Hierarchical linear modeling controlling for demographics (Gender, Age, and Education levels) will be used to understand the effect of human perception toward color integrated with light and materials. Implication Through this study, the significance of understanding transition process from two-dimensional color chosen to three-dimensional color applied is addressed for the designing of indoor environments. Human perception toward the color integrated with light and materials covered to three-dimensional objects in a space is demonstrated. It will be beneficial to consider human emotional reactions to the integration of the three. Finally, this study provides the practical framework for empirical research on the relationship between human emotion and the integration of the three for future application. It will be adapted to design processes of color selection for three-dimensional design-related disciplines such as interior design, environmental design, product design and architecture, etc.

REFERENCES

Higher Education Health Care Clinic

Nami Khurelchuluun, Virginia Commonwealth University

ABSTRACT

Our current health system has been getting a lot of attention for its failures. As a student from the Mid Atlantic city, I have experienced minor car accidents to major health issues in the past couple years. Which have taught me the inaccessibility and failures of our current healthcare system. Higher Education Facilities has been a huge factor in the young population growth and redevelopments. Regardless of the insufficient awareness of the higher education healthcare buildings, there could be solutions by building a prominent Student & Wellbeing Health Clinic that provides students easy and efficient accessibility. There are 3 basic problems that can improve the quality of the healthcare services. First, if the Health building is isolated from the rest of the campus, bringing the location near the dorms would solve the problem of accessibility. Second, utilizing smart technology. UCSF Medical Center tested bionic robots for 5 years to fill prescription and drop the medications off at the nurse stations with 100% accuracy. (Pickett, 2016) According to their experience robots are faster and more accurate than people. Utilizing robots or smart technologies can provide 24/7 pharmacy services efficiently on university campuses and will meet the demands of students. I am inclined to do more research on automated pharmacies for easy access to any over the counter medications or prescribed medications. Lastly, in order to provide quality services it is crucial to have enough time for physicians. One of our biggest issues right now is the long appointment wait. Providing fast trauma clinic, x-ray rooms and laboratories, overnight suites, dental clinic, and 24/7 smart pharmacy on campus will create room to bring more staff and enhances the not only the quality of the service but the time management. Surveying staff and nurse practitioners who work at the student health services can bring insights of improvements. Asking questions like what can improve their performance at work in order to provide quality services. Florida State University, Wellness Center. How can
you keep bring something refreshing yet still keep the familiar design language? One of their challenges was to follow the guidelines to keep the incorporation of exterior features Collegiate Gothic and Jacobean Revival architecture traditions but were expected to bring something refreshing and still keep the same visual language. (Elliot, 2009) Their interior functions were carefully positioned within the building in an effort to encourage student interaction and the case of medically related spaces. The idea of nature as a primary healing power was an important concept throughout the design process, therefore windows were placed in the atrium to allow views of the park to permeate the interior and be a constant reference point for visitors and the building’s occupants. In conclusion, the thesis project will be bringing a prominent Student Health and Wellness Clinic presence on campus that is consciously programmed, technologically advanced and is easy to access. So far providing 24/7 access to pharmacy, urgent care, primary care, laboratories, x-ray facilities, general administration offices, and mental care centers to be placed in the building. Finding a building that would have a strong sense of symbolical and physical connection to the concept, knit the departments together and aids in wayfinding at the heart of the University.

REFERENCES

Florida Wellness Center Project
Arizona State University Wellness Center
Incorporating Visual Access to Nature in a Stressful Nurses Working Environments

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Michelle Pearson, Texas Tech University

ABSTRACT

Introduction: Nurses burnout is well discussed in the existing literature (Hendrich, Chow, Skierczynski, & Lu, 2008; Vahey, Aiken, Sloane, Clarke, & Vargas, 2004) and there are many approaches to address this issue. The existing literature addresses nurses stress with the help of high-quality break areas, napping strategies, centralized and decentralized nurses stations, etc. However, the problem of nurses burnout is still persistent due to undulation in work regulations, long working hours, understaffing, and unmanageable workload (Laschinger & Fida, 2014; Nejati, Rodiek, & Shepley, 2016; Ross, 2010). As a result, on a typical shift, the nurses are unable to stay away from the patients and take breaks due to the workload. Therefore, bringing restorative elements in nurse’s work environments can be a way to reduce stress and promote the overall well-being of nurses.

Theoretical framework: The theoretical framework selected for this of this study is the attention restoration theory (ART). ART provides three concepts of work environments, which are directed attention (ability to work under acute pressure), soft fascination (ability to restore work capability), and directed attention fatigue (ability work long hours) (Kaplan & Kaplan, 1989). ART explains that presence of nature or biophilic components in the working environments which can allow the occupants to restore attention.
Methodology: This two-fold research poster includes a literature review and a case study. The aim of this literature review exercise was to explore the available means to incorporate visual nature stimuli in the stressful working environments. The findings of this study provide guidelines for nature scene selection and tools to incorporate visual nature stimuli in existing nurses work environments to ameliorate nurse’s stress. The tools discussed in this research poster can be retrofitted in the existing windowless work environments of nurses. The second part is the case study. The site selected for this project is Section A of the Outpatient Surgery Unit situated at the first floor of a teaching hospital. This facility is mostly occupied by the nurses who work 8-hours daily shift for preparing the patients for non-invasive surgery. The nurses have no immediate access to exterior view or natural light; moreover, to see the exterior view, nurses must walk outside the facility.

REFERENCES


Cultivating Community Health Through an Urban Garden and Grocery Store.

Amy Williams, Virginia Commonwealth University
Roberto Ventura, Virginia Commonwealth University

ABSTRACT

Motivation
Today 49 million individuals in the US are affected by food insecurity (Whittle et al., 2015). Low-income populations tend to depend solely on convenient stores for calorically-dense, nutrient poor sustenance, and suffer from health problems that drastically shorten or debilitate lives (Dhurandhar et al., 2016). In a small mid-Atlantic city, there is a dramatic divide between wealthy and low-income communities in terms of the accessibility as well as the types and quality of foods available. Several communities in this city meet the characteristics of a food desert (Wood et al., 2017). Problem Grocery store chains typically avoid building in low-income communities for fear of low profits (Wright et al., 2016). Research has shown that in addition to product quality and price, aesthetics are a critical component of the shopping experience (Webber, Sobal & Dollahite, 2010). The need exists for a market that sources fresh and affordable produce in an accessible location to those living in food deserts. This store should also provide an aesthetic experience that cultivates strong community by attracting users to spend time and socialize in the store. Design can have a strong positive impact on food desert communities. By designing an aesthetically pleasing, well-stocked grocery store along with community gathering and learning spaces, food shopping is elevated from a mundane task to an experience that cultivates a thriving community.
Methods Further research will include case studies of community gardens and farms as well as markets. Interviews with area natives that provide insight on the community needs within the food desert will be conducted. An understanding of the current food sources within the food deserts will be gathered. A literature review about how design and marketing techniques influence the shopping carts of consumers will provide value in understanding the strategies behind grocery design.

Results Studies of community gardens show that autonomy over the garden keeps participants invested in their community. (Hondagneu-Sotela, 2017). Preliminary observation of the community reveals the presence of several convenience stores. Store design and marketing strategy research reveal that the marketing of nutritious foods is not as ubiquitous as packaged foods (Caspi et al, 2017), but that there is promise in marketing fresh produce to children at point-of-sale kiosks (Holmes et al, 2012). Priming shoppers to make health-conscious choices also influences the shoppers’ selection in the grocery store (Papies et al, 2014).

Conclusion This research will support the design of an urban community garden and grocery store. A café that doubles as a nutrition education space will build connections and knowledge within the community. Education and play areas for children will develop fundamental nutrition knowledge for children as well as support a pleasant shopping experience for parents and caregivers. A kitchen will house high-quality equipment used to produce food for the store as well as teach cooking classes to the community. A community garden will engage the neighborhood in the process of growing produce for the store and offer dynamic health benefits including increased physical activity, gardening skills, and strengthened community ties. By engaging with all age groups and crafting a pleasant grocery experience that makes the shopper feel valued, design can begin to address food insecurity, dependence on nutritionally inadequate convenience store food, and health problems that many urban neighborhoods face.

REFERENCES

Whittle, Palar, Hufstedler, Seligman, Frongillo, & Weiser. (2015). Food insecurity, chronic illness, and gentrification in the San Francisco Bay Area: An example of structural violence in United State


Webber, Caroline B., Sobal, Jeffery, & Dollahite, Jamie S. (2010). Shopping for fruits and vegetables. Food and retail qualities of importance to low-income households at the grocery store. Appetite,
Music as a Mediator: Designing a Public Music Library

Caroline Matteson, VCU

ABSTRACT

Motivation
In a city with deep roots in the slavery, music may be more powerful than language or the toppling of monuments to help create a cultural identity that every demographic can fit. Music has the potential to both create social cohesion and encourage conflict resolution (Koelsch, Offermans, & Franzke, 2010). Not only can music improve mood in an individual, but musical contagion can affect masses of people, offering a way to bond disparate groups. Problem Music is unfortunately not equally accessible to all races and ages. Children in low socioeconomic schools and aging adults are two populations that are less-likely to engage in musical opportunities due to prohibitive costs, lack of resources, diminished support, reduced funding, insufficient skills for participating in organized groups, and no access to spaces for playing (Deisler, 2011; Hallam, Creech, Varvarigou, & McQueen, 2012). Creating a space to share the experience of music—both making and appreciation—would give the city an opportunity for reconciliation and community bonding. A public music library could remove many of the prohibitive factors for marginalized populations.

Methods
To ensure that these populations are being served, a team of community members who lead bi-weekly music-workshops for musicians of any age or level will be interviewed. Literature reviews of acoustics and spatial organization will help to inform design choices and practical considerations. Further, researching methods to reduce attrition in musical settings as well as projects that have successfully encouraged community engagement will be important aspects for design development. Determining and analyzing case studies in published articles and site visits will reveal tested solutions and offer feedback for how to improve upon existing examples. An
application for funding will be submitted for traveling to New York to tour the New York Public Library for the Performing Arts. Design details specific to music libraries will be investigated with the assistance of an internationally recognized library design firm, currently applying this research into ongoing projects utilizing similar acoustical and storage needs.

Preliminary Results
Creating a space that alleviates the pressure of musical mastery, designing elements that offer patrons interaction and control (Wagner & Geerdes, 1996), and offering opportunities to engage in non-committed musical ensembles (Pitts & Robinson, 2016) are correlated with continued participation in music. Further, community outreach appears vital in gaining patrons from underserved districts. The final design must consider how to equivalently serve the diverse skillset of the population, catering both to the musical novice and genius.

Conclusion
The research methods outlined will support the design of a public music library for the immediate community. To address the imbalance in musical engagement, the space will accommodate renting instruments, checking-out scores, listening to audio recordings, and collaborating with other musicians. There will be practice studios available for use by individuals and ensembles, stacks, a café and lounge space to encourage leisure, and a community concert hall for performances. Music is a shared human experience, and access to learning and creating music should be equally available to all.

REFERENCES


Deisler, A. (2011). A comparison of common characteristics of successful high school band programs in low socioeconomic schools and high socioeconomic

Hallam, S., Creech, A., Varvarigou, M., & McQueen, H. (2012). The characteristics of older people who engage in community music making, their reasons for participation and the barriers they face. Jour

Mentoring Facility

Dara Merritt, Interior Design

ABSTRACT

There is a lot of potential for interior architecture and design to engage with the community in the context of social sustainability. Social sustainability being the ability of a community to develop processes and structures which not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community”(business dictionary). There is a need to explore suitable frameworks and methods. “I argue that the interior architecture community, using core knowledge, can enrich and open up opportunities for other communities, and it is imperative to let communities, stakeholders, and other fields know what interior architecture can contribute to the public good” (D. Smith et al., 2014). In thinking how design interventions can enhance community dynamics, the role urban institutions have in surrounding communities in need of assistance due to economic factors presented itself. Through personal community involvements and conversations had with local residents, concerns came from some of the community about disconnections between urban institutions and surrounding areas in need. With design it is both enhancing and empowering experiences for all or it is limiting it. Initial research looked at how design interventions can fail if one does not know who they are designing for. An example of this is the university of Chicago’s past efforts on intervention in the Woodlawn neighborhood surrounding their campus. They installed a coffee shop, arts center, and a center to teach kids squash. A resident of woodlawn who also worked at the university stated the university could do much more and how the facilities that were being built were not centered around what people in the neighborhood really needed (Semuels, 2015). Universities often set up shop in cities, but the relationship between the two communities can be quite distant. “Campus suggests a space apart. In order for universities to participate in the revitalization of American cities, this architectural and intellectual forms must be turned inside out.” (Haar, 2012). What
responsibility should a university have to its local urban community? In order to encourage and reinforce connections in regards to interior design the project will look at how design can take a more dynamic role in the transferal of different environmental cultures; generally and symbolically. What better way to connect urban institutions with surrounding urban areas than through mentoring public school students in regards to academics and life style? There are a lot of strong research bases that support the efficiency of quality mentoring, which have found positive outcomes across social, emotional, behavioral, and academic areas of youth development and has immense benefits for the mentees as well as the mentors. Using scholarly peer reviewed articles from different disciplines such as urban planning, psychology, sociology, etc…, statistics and data, hands on interview with stakeholders, and precedent studies, this project will investigate the creation of a multi-use mentoring facility that will offer spaces to work hand-in-hand with the university and surrounding public school students on personal goals and activities that are not only educational, but fun, engaging, and promote self-expression. Meaningful design can better serve the community and promote craftsmanship, while respecting the environments where one works and lives. The goal of this space is to be an embodiment of social, environmental, and economic transformation through the manipulation of volume, mass, space, texture, light, shadow, program, and other elements in order to achieve active spaces that encourage interaction.

REFERENCES

Alana Semuels, Should Urban Universities Help Their Neighbors?, The Atlantic, Jan 19, 2015
Sharon Haar, What Should Universities Do For Their Cities?, zocalo, January 11, 2012
Social Impact | Scholarship of Design Research | Poster

You build like a girl: Guiding young women back to the craft and design fields

Sara Hackett, VCU MFA Interior Environments

ABSTRACT

MOTIVATION This topic is influenced by a personal interest to learn about how things are built and give young women a resource to learn the skills necessary to enter into a variety of craftswomen, design, and construction careers. Expanding the future demographics of these fields must start with early education and demonstrating to young women their potential. Keeping girls interested in design & engineering as they enter into higher education helps ensure more equal representation within undergraduate degrees and, especially afterwards, in the associated professions (EQxD Metrics, 2017). This matters locally as the area boasts a large number of hand craft and design shops influencing the surrounding built environment – ensuring women are a part of shaping this landscape is a powerful message to future young women.

PROBLEM Young women from primary through high school are particularly affected by the role of leadership and mentorship in their communities, receiving valuable exposure to career options that make an impact on their decisions to enter a specific field (Yancey, A. 2011). Opportunities are lacking for young women to gain exposure through hands on design, construction, wood & metal working experience, leading to underrepresentation of females in higher education and associated professional fields (“Women in STEM”, 2011). Perceived gender barriers are still high for girls and may help explain why Science Technology Engineering Art Math (STEAM) fields are not their top career choices (Girl Scout Research Institute, 2012). By introducing female training programs at a young age, exposure is gained early enough to cultivate rudimentary skills and build confidence through practice and real world applications, cementing these skills as a
viable path for employment (Jolly, E. 2004) An approach to addressing this problem is to introduce training programs on a small scale and react to these small scale effects with community specific alterations.

METHODS Research includes exploring the history of local craftswomen professionals and examining STEAM-focused youth programs for precedents through case studies, interviews with industry professionals and educators, & literature reviews. In an effort to tailor the program to the local community audience STEAM job viabilities and programs focused on female training will be sought out further.

RESULTS This research identified programs focused on youth specialty training, similar to a vocational high school which gives program examples and roadblocks encountered. A multitude of resources conclude that building skills and confidence in young women early on has a great impact on future career choices.

CONCLUSION To explore a hands on training and design skills space for young craftswomen and her surrounding community environment. The skills introduced will be woodworking and metal fabrication methods used in building construction, product and furniture production, & interior design application. The goal of this space is to provide the tools and location for experts and newcomers to learn, train & create under tailored project specifications while providing a rotating canvas for the local community to make their own. Seasonal exhibitions will act as platforms for these young women to express their vision and hone their craft, and in turn draw in community activities and interaction.

REFERENCES


sites/default/files/womeninstemagaptoinnovatio


Jolly, Eric J., Patricia B. Campbell, and Lesley Perlman. Engagement, capacity, and continuity: a trilogy for student success. Funded by the GE Foundation. Groton, MA, Campbell-Kibler; St. Paul, Scien
Introduction to Ecotourism in Urban Environments

Huayu Du, Virginia Commonwealth University

ABSTRACT

Motivation
Providing authentic outdoor experience for individuals and families becomes a significant segment to the tourism market. According to the U.S. government’s National Travel & Tourism Strategy (2012), 40% of overseas travelers enjoying their visit to historic sites; 23% to cultural sites, and 20% to national parks. By 2012, there were 10 million US travelers in total who were fond of nature-based, culture-based, heritage and outdoor adventures (Bricker, 2012). Compared to long-distance and high-cost travel, this study is trying to promote a more economical and beneficial way for citizens to enjoy nature with less time or money. This introduces the language of ecotourism and responsible tourism into an urban setting. The market of urban eco-destinations in Richmond Virginia with overnight stays is limited, so it will serve as the experimental model. Belle Isle, a small Island with rich historical content that is is only open during the daytime for outdoor adventures. This research will propose to transform obsolescent buildings and infrastructures on the island into functional spaces and encourage people to spend time.

Methodology
To conduct this research, a series of worldwide examples of ecotourism and responsible tourism will be referenced. They will show the renewal of the existing structures that maintains historical context, local identity, structural integrity, and vitality of the infrastructure. Data will be collected through surveys to identify varying activities and accommodations. This research will discuss how to minimize tourists’ carry-ons, and promote light-travel experience through providing full-scaled service.
Originality/Value
The introduction of ecotourism into city life allows citizens to travel close by with low budget and to compose themselves in nature. It also gives another justification for conservation of the environment. According to Ibrahim Ajagunna, Fritz Pinnock and Robert Kerr (2014), the development of the nature-based tourism should treat the natural environment as an equal and important actor based on shared environmental ethics. As part of the tourism product it also requires the preservation and protection of those natural wonders.

Conclusion
Richmond Virginia is filled with rich history and has an island named Belle Isle, a rocky island in the middle of the James River that flows through the center of the city. It will be a great location to imply the main concept of this study and create a venue for individuals and families to spend a day out in nature. The design is to provide a short-term fun, relaxing vacation while reducing the impact to the surrounding ecosystem. The space will provide all-inclusive service for the visitors, no need for them to bring any luggage. A combination of lodging and meditative space within the natural environment will help participants refresh both their mind and body. To minimize the interruption to nature the use of sustainable recyclable materials that are locally sourced will be essential for the future design.

REFERENCES


The Impact of Indoor Environmental Quality (IEQ) on Occupants’ Performance, Satisfaction, Health and Learning Experience in Workplace and Classroom Buildings

Suyeon Bae, University of Minnesota
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ABSTRACT

Overview
The authors present a comparison of indoor environmental quality (IEQ) from eight post-occupancy evaluation (POE) studies of four workplace and four classroom buildings to identify their impact on occupants’ health and well-being. Sustainable Post-Occupancy Evaluation Survey (SPOES) developed by a Midwest University interdisciplinary team provides an evidence-based quantitative analysis of occupants’ satisfaction to identify IEQ criteria that are successful versus those that need improvement in buildings. The SPOES workplace questionnaire has 12 IEQ categories that impact occupant health and well-being. The workplace categories include acoustic conditions, appearance, cleaning and maintenance, daylighting conditions, electric lighting conditions, furnishings, indoor air quality, technology, thermal conditions, vibration and movement, privacy, and view conditions. The SPOES classroom questionnaire has all the aforementioned categories except privacy.

Methodology
SPOES consists of a self-administered, Internet-based, questionnaire completed by building occupants. Participants (see Table 1) rate their level of satisfaction on a Likert-type scale from 1 (very dissatisfied) to 7 (very satisfied). They also rate the influence of their physical environment on their perception of their work/academic performance and health on a scale from 1 (hinders) to 7 (enhances). Findings from four workplace buildings POEs; WP1 (N=47), WP2 (N=74), WP3 (N=65), and WP4 (N=72), and four classroom buildings POEs; CR1 (N=26), CR2 (N=34), CR3 (N=31), and CR4 (N=19) were analyzed.

Findings and Discussion
Based on multi-level linear regressions, among 12 IEQs for work environments, thermal conditions impacted occupants’ satisfaction, work performance, and health in the overall building and primary workspace. In the primary workplace (see Table 2), acoustic conditions impacted satisfaction with the overall building (B=.10, p=0.01) and the primary workspace (B=.12, p=0.05). Daylighting impacts health in both the building (B=.08, p=0.01) and the primary workspace (B=.15, p=0.001). Privacy impacted satisfaction (B=.10, p=0.01) and work performance (B=.18, p=0.001) in the primary workspace. Furnishing impacted satisfaction (B=.16, p=0.001), work performance (B=.18, p=0.001), and health (B=.21, p=0.001) in the primary workspace. Cleaning/maintenance impacted work performance in the overall building (B=.13, p=0.001) and primary workspace (B=.14, p=0.001). For classrooms (see Table 3), satisfaction with IEQs are more associated with primary workspaces rather than the overall building. For example, view conditions impacted satisfaction (B=.57, p=0.001), learning experience (B=.43, p=0.001), and health (B=.17, p=0.01) in the primary classroom. Furnishing also impacted satisfaction (B=.26, p=0.001), learning experience (B=.16, p=0.01), and health (B=.25, p=0.001) in the primary classroom.

Conclusion
The results indicated that thermal conditions had a greater effect on occupants’ satisfaction in the workplace than in classroom buildings. Whereas, furnishings had both significant effects on occupants’ satisfaction in the primary workspace and classroom. Daylighting had a greater effect on occupants’ perception of health in the workplace than in classroom buildings. View conditions had had a greater effect on occupants’ satisfaction in classroom buildings than in the workplace.
REFERENCES


Improving the Quality of Life of Low-Income Individuals through Hands-on Learning

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ABSTRACT

Low-income individuals often live in older homes that lack adequate accessibility, have poor energy efficiency, and contribute to significant health and safety issues. The purpose of this study is to explore how an interdisciplinary design studio can bring visibility to a declining neighborhood while helping low income residents improve their living conditions. Congruently, the studio serves as a teaching tool for hands-on experience and opportunities for interdisciplinary collaboration. Poor housing environments have been found to affect both physical and mental health conditions. Exposure to poor housing can increase the risk of respiratory infections, asthma, and mental health issues. Research shows that health is improved by good design (Pevalin, D. J., Reeves, Baker, & Bentley, 2017). The interdisciplinary design studio in this study addresses these issues and creates solutions to optimize living conditions that have a direct impact on the healthy, safety, and welfare of the underserved residents. Research shows, hands-on, experimental, and people-oriented learning is preferred among Interior Design students (Watson, 2001). By engaging students in real life design scenarios which emphasize the act of “doing”, we are supporting the way most students prefer to learn and increasing their potential for profound understanding of the topic matter at hand. This poster will illustrate the impact of an interdisciplinary design studio, both from a student standpoint, as well as the individuals it is serving. Students are given a learning assessment through class activity surveys and course evaluations to assess the student’s knowledge and skills gained. The residential impact is assessed.
through short surveys at the end of each consultation, retrofit project, and hosted event. Findings reveal the resident’s feelings about working with the interdisciplinary design studio and their perception as to how it contributed to their health, safety, and welfare. They also reveal the student’s opinions on the impact of hands-on learning. Integration of hands-on, real life experiences into the interior design curriculum creates a genuine situation that is not typically achievable through fabricated projects. The result of these experiences is Interior Design graduates who will practice with a greater understanding of both theory and practice (Giard & Schneiderman, 2013). Exploring examples of hands-on incorporation into the Interior Design curriculum provides a guide for educators wishing to use these or similar methods in their courses.

REFERENCES


Common Area Redesign For Fullness of Senior Living

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ABSTRACT

Population aging is widespread across the world. In US, 76 million baby boomers are at or approaching their retirement age, which brought a huge demand on senior care housing and service for the next 2 decades. In addition, the continuous increment of life expectancy also proportionally increases the overall demand of senior care. From an individual’s perspective, the extended post-retirement period manifests its significance. In the US senior housing is typically categorized into four major types: Independent Living, Assisted Living, Nursing Home, and Continuing Care Retirement Community (CCRC). There are also some emerging models including co-housing, aging in place and green house. Currently, only about 10% elderly living in any type of retirement institutions. One of the main reasons that deter seniors from choosing retirement institutions is their concern about emptiness. This concern has been echoed recurrently during our field studies and senior living surveys, which motivated the theme of this design research - how to fulfill the psychological need of seniors at different stages of their post-retirement life? We use St. James Place as a case study and redesign. As the only CCRC in the region, it has a complete Continuum of Care that includes Independent Living, Assisted Living, Nursing Care, and Memory Care to complement the needs of each senior resident. We did conceptual design for common areas to meet “young men’s” needs and to attract "new generation elderly”. Based on design theories including Person-Environment [1] and Meaning of Space [2] and guided by extensive field surveys with current residents, managerial staff and caregivers at the St. James Place, we performed conceptual design of four common areas at this facility into
four retro-styles exhibition rooms of the past eras with contemporary design ideas. With an overarching goal to stimulate the elderly’s youth memories, these exhibition rooms correlate and complement with each other to realize the following design concepts: (1) Time: the elderly are more willing to make new friends and exchange their own stories in a common memory environment. The retro-style design stimulate this common memory and consequently set stage for people to connect. (2) Sustainability: not only adopt sustainable materials, we also incorporated some smart features enabling rooms to transform from time to time in order to simulate the scene and taste from different eras. (3) Cooking: according to our survey, more than half of the elderly are interesting in cooking for the senses of home, accomplishment in addition to food. We set a center kitchen in one common place. The Person-Environment theory helped us to systemize the design of a cooking space to meet the elderlies’ specific demand. For instances, a special visual signage system is incorporated for dementia patients; and special cabinets are designed for wheelchair users. (4) Outdoor activities: many residents prefer to have outdoor activities in nice weather. So we designated an area for them to enjoy the nature and to engage in outdoor activities such as gardening and vegetable growing. The latter goes well with cooking and reinforces the sense of accomplishment. (5) Arts: arts related activities are fostered both indoor and outdoor. As an example, painting has been one of the favorite activities among residents. The community holds residents' exhibition regularly on the lawn or in one of the exhibition room so as to create additional opportunity for seniors to maintain a proper level of social engagement. In summary, we pay special attention to the elderly’s psychological needs. The retro-style + contemporary design gives special meanings to those common areas, helping the seniors to re-live through their precious youth memory and become more open for activities and social interactions with others. Appendix shows the conceptual design of one common area – assistant living area.

REFERENCES


Storied Objects: Post-Household Disbandment Older Adult Place-Making through Meaningful Possessions

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ABSTRACT

If older adults do not age-in-place, one of their final residential transitions involves a significantly larger scale of downsizing and ridding than previous moves. During this process, also known as household disbandment or casser maison (literally “breaking of house”), owners divest themselves (or are involuntarily divested) of most household items and personal possessions. Difficult decisions must be made about what to give or throw away and what to keep. Arduous, time consuming, and emotionally laden, it also requires saying goodbye to a known lifestyle and moving into a smaller space or a space with different amenities. There has been increased social and anthropological research on the household disbandment process during the last 15 years. Less is known, from an interior design perspective, about the subsequent process of reestablishing place, or place making, after this residential transition. Residential needs of older adults will continue to grow in importance with the graying of America. Demographics are shifting as baby boomers worldwide become older adults. By 2050, ninety million Americans will be age 65 or older. It is, therefore, important to understand older adult perspectives on the post-household disbandment place making process. The goal of this study is to understand how older adults (n = 15) make place through the personal possessions they choose to bring from their disbanded homes into their new residential environments. A symbolic interactionist world view underpins the conceptual framework of this dissertation study. Data is being collected and analyzed through a constructivist grounded theory method that is sensitive to narrative inquiry to answer the research questions: 1) “What characteristics are associated with the possessions older adults move with them during late life residential transitions and 2) “How do older adults use these possessions to contribute to place making after household disbandment?” Participants are retirees.
(male and female, married and single), age 65 and older who moved as a concession to age-related limitations (anticipated or actual) into smaller spaces. Their move required a comprehensive downsizing of their previous households and occurred within 3 years of initial contact with the researcher. Although most participants now live in some type of senior apartment, older adults are included who live in traditional apartments, a house substantially smaller than what they previously owned, and rooms within an adult child’s house. All of the residential sites are located in mid-sized to large urban areas within two Midwest and Southern states. Photo-elicitation, in-depth interviews, life story narratives, and orthographic drawings are being collected and analyzed in an iterative manner to develop categories from emerging codes. The researcher is conceptually mapping relationships between the categories using both hand graphics and NVivo software. Life story narratives of household units are being constructed and analyzed as case studies through which categorical relationships are being verified. Current findings suggest that a relationship exists between older adults’ command-central-chairs (the seat they primarily occupy during the day) and a vignette of precious possessions. Older adults and their place making helpers (family and professionals) act as bricoleurs, a French word describing people who gather what they need from resources at hand. They create something new through a process known as bricolage. The processes of place making and bricolage merge in post-disbandment late life residential transitions. Precious possessions collected during an active life course help construct and display the life story narrative through and by which the older adult is known to self and others. This finding illuminates the importance of personal possession placement within an interior to achieve the potential of older adults feeling “at home” after household disbandment.

REFERENCES


Computer aided design: Does it enhance or hinder flexibility and creativity in design process?

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ABSTRACT

Interior design education has come to a crossroad where educators must take a critical look at the best ways to instruct students pertaining to the use of technology. Students are now born where the use of computers is a part of their everyday existence, and they depend more and more on technological tools to inform their work, play, and education (Lai & Hong, 2015). The aim of this mixed-method study is to explore interior design students’ design process with an emphasis on their use of CAD (computer-aided-design). The research questions are: 1) How do students develop their design ideas? 2) What tools (i.e. CAD or hand sketches) do they use to develop their design ideas? 3) How does the use of CAD influence their design outcomes? We explored design process stages such as creativity, concept development, schematics, sketching, space planning, and selection of furniture and finishes as a way to investigate these concepts. Major design decisions are made during the early stages of the design process when the design concepts are created (Turkyılmaz & Polatoglu, 2013), and idea sketches are believed to be associated with innovation and creativity (Purcell & Gero, 1998). What happens when students start using CAD in the initial stages of their design process? Researchers have found association between the use of CAD and creativity. For example, Elam and Mead (1990) argued that software use can undermine or enhance creativity. Lastly, in a study by Hanna (2012), it was found that lengthy exposure to CAD correlated with number and variety of design ideas. Data were collected from students taking their last design studio in the interior design program in a CIDA accredited Southeastern university. This was a longitudinal study that took place over three semesters using
40 self-administered questionnaires, 12 in-depth interviews, and 12 student portfolios. The questionnaire included questions on concept development, sketching, and computer use such as what software programs the students used, when they started using them in their design process, and the impacts of those programs on their design decisions and final design outcomes. During the interviews, participants were asked to review their questionnaire responses and senior portfolios which included studio and internship projects. They explained skills gained in their classes, how they formulated design concepts, what gave them inspiration, and their design process for each project. See Appendix 1 for a summary of results. Findings revealed that students developed design concepts from images (internet and print), sketching, adjacencies, project scope, and client needs. They believe sketching is fairly important on their design process, however they lack the sketching skills to use it effectively. Majority of students change their designs to be able to create them on computer but they believe this is not a major influence on their design outcome. Time constraints were a driving factor in using CAD for generating preliminary designs. Lastly, findings suggested that CAD can be beneficial throughout the design process when it does not suppress creativity. Implications of this study may provide insights on curriculum and teaching strategies. Teaching methods should be reviewed, and students should be encouraged not to limit their design decisions on the basis of their CAD skills or limitations of digital tools. Faculty should discuss strategies such as in-class creativity exercises and more emphasis on free-hand ideation sketches. In addition, students may benefit from an earlier introduction to 3D modeling software, which enables more flexibility regarding design decisions. Ultimately, educators will have a better understanding of the student design process and the role of CAD. Continued studies on this subject are encouraged to better inform best practices for interior design students in a highly technological age.

REFERENCES


The Results are In: Interior Design Program Chairs Reveal Perceptions of Credentials for Faculty

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ABSTRACT

The acceptable terminal degree requirement for teaching interior design at the university or college level was not clearly established in interior design’s beginning educational development. As recent as the Interior Design Educators Council (IDEC 2014) Annual Conference, a panel discussion addressed areas such as the terminology for master’s degrees in interior design, rationalization for the panels suggested modifications, and plans for adoption of these modifications (Harwood, Weigand, & Dohr, 2014). Over the past ten years, educators within IDEC have written journal articles, presented at conferences, written chapters in books, and participated in town hall discussions at regional and national meetings concerning the problems that exist with the current state of graduate degrees currently offered in interior design graduate education. Existing graduate programs in interior design and programs that are developing a graduate program need to know the graduate degree that interior design chairs across the United States desire in a candidate applying for an educational position. From data provided by interior design chairs, a preferred degree preference can be identified and the significance of NCIDQ certification can be determined. As many universities move toward online master’s degrees, data can also be obtained that would record the acceptance level of an online master’s in interior design as a credential for obtaining a faculty position. Online master’s programs appeal to professionals practicing interior design who would like to pursue a graduate degree without leaving their career. This study can aid graduate programs in their graduate degree program development. The purpose of this study is to determine whether program chairs in interior design have a preferred degree credential for candidates seeking a full-time tenure track position or a
full-time position at their institution and to determine if there is a correlation between this preference and the program chair’s university demographics, their own credentials, as well as their acceptance of an online terminal degree. The results will provide informational data to program chairs as well as candidates seeking employment and undergraduates considering master’s programs. Data were collected for the 2 research questions using a quantitative survey instrument. Multiple regression analysis was used to analyze the relationship between the dependent variable, the Hiring Perception Scale and the independent variables, characteristics of the program. Multiple regression analysis was also used to analyze the relationship between the dependent variable, the Hiring Perception Scale and the independent variables, the program chair’s credentials. The survey instrument was a self-administered online questionnaire divided into 5 sections. Some of the demographic categories utilized in the survey instrument were developed by the Interior Design Educators Council (2008) in their member survey and other questions were based on questions used on a survey by Adams and DeFleur (2005). Their survey examined the acceptability of doctoral degrees earned online as credential for obtaining a faculty position. The group of participants for the survey was composed of interior design-program chairs in interior design programs accredited by the Council for Interior Design Accreditation. The poster will exhibit a graphic representation of data and information on a major issue that is facing interior design education. The poster will list the key issues resulting in the need for the study. Research questions will be presented which guided the survey instrument development. Numerous tables will exhibit data collected that has implications to the study. Conclusions will be derived from the data and shown on the poster. The poster on display will open a dialog of discussion among educators from across the United States and Canada.

REFERENCES


The impact of practitioner feedback on interior students’ creativity in a lighting design studio

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ABSTRACT

The nature of design studio is a creative problem-solving process that evolves through the act of giving and receiving feedback between the design professionals and learners (students). As future designers, students should have an open mindset towards critique as a means of obtaining feedback about their designs (Carmel-Gilfilen & Portillo, 2010; Hokanson, 2012). Nevertheless, the scope of feedback should not be limited to feedback and critiques by the instructor who is directly in charge of the class. In fact, a combination of feedback from instructors and practitioners would benefit design students the most (----, 2013). However, the autonomy to implement the feedback by the students often depends on intrinsic factors. Students’ personalities and their problem-solving styles play important roles in their decision-making process (-----, 2007, Sung & Chung, 2012). There is limited literature about the impact and effectiveness of practitioner feedback on design students’ learning. Hence, the authors analyzed the impact of practitioner feedback on students’ creativity within the context of a lighting class at a Midwest US University from 2015 to 2017. As a collaboration between an educational institution and a manufacturing company, students design and build light fixtures that represent the brand of the company using sustainable materials. During a five-week period, students experience multi-perspective feedback from practitioner via social media. Students post their work (e.g. conceptual sketches, 3-dimensional models and technical drawings) on an online Facebook group and receive critiques from the company CEO. Also, students receive desk critiques two times per week in their normal class period from the instructor. Students’ final designs and prototypes are displayed at a trade show for retailers, interior designers, and attendees to vote for the solutions.
that are most creative, marketable and profitable (Fig.1). The authors compared and evaluated students’ final solutions (Fig.2) with respect to the feedback they received, grades by the instructor, and the trade show participants’ votes. Based on the interactions between students and the instructor as well as the company CEO, their design process was classified into high responsiveness toward feedback versus low responsiveness toward feedback. Likewise, their final design solutions went under two categories: high creative performance and low creative performance. Using a bivariate table, the authors examined the correlation between the groups. The recorded online comments between students and the CEO were coded and classified into themes and categories. The findings revealed that students benefited from practitioner feedback (Fig.3). Their creative successes were not only confirmed in an academic setting (the classroom) but in the professional setting (the trade show). This presentation will highlight the importance of practitioner feedback on students’ creativity.

REFERENCES

-----, -.-. (2007). Motivation and Design: Nurturing Creativity in Design Students. IDEC Southwest Regional Conference. 29-36


Spin the wheel- Take a spin “A game based peer critique”

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ABSTRACT

In design education, critiques are communication events where students present their designs or ideas and peers provide feedback. Blythman et al. (2007) described peer critiques” They are run by the student group with the instructor acting as a facilitator, and they are highly informal. Peers can give feedback to each other in many ways—verbally or as anonymous written comments given to the individual.” This poster will address peer critiques as feedback sessions between classmates who have the perspective of having worked on their own project individually and are uniquely qualified to critique their peer’s work. Even when educators believe in the importance of peer feedback, it is a challenge to get students to participate in critiques that give thoughtful, detailed feedback of their classmate’s projects. According to Brown (2014), it is not easy for students to participate in critiques for a number of reasons: Some students, especially at lower levels, are new to design language, so they feel they do not have enough knowledge to contribute to the critique. Further, they do not want to express negative feedback that would hurt their classmates’ feelings. Students are also afraid that when it comes to their own work, students will give them negative feedback, so they chose not to say anything. Other students simply do not care to share their opinions. This critique method promotes students’ participation in a game-like setting while at the same time the presenter is given the opportunity to reflect-in-action when receiving feedback for improvement based on the peer critique. According to Schön’s (1991) reflection-in-action theory, it brings ‘reflection’ to the center of understanding how individuals access and react to situations. This game-based learning technique uses the theory to hypothesize
the design improvement actions that will be implemented based on peer feedback received and reflected upon. Park, & Baek (2009) defined game-based learning as the focus on achieving a particular objective of educational content through game play. Players’ attempts to solve problems are tested throughout the learning session. In today’s classrooms, most the educational games used are often focused on entertainment rather than learning (Kim, Park, & Baek, 2009). Therefore, the authors designed the Spinning the Wheel Critique as the balance between entertainment and learning. Spinning the Wheel Critique is an activity that mimics a family board game. It gives design students the opportunity to focus on one element at a time and gives the presenter direct feedback “reflection-in-action”; it also fuels a true and open discussion as students critique each other. Further, it provides the presenter with precise feedback on different elements of the design. The randomizing of the prompt tells the students which elements to give feedback about, which takes the pressure off a formal critique session. With the action plan sheet, the presenter will have a tangible document of feedback that will help the presenter improve their work based on the peer critique. Therefore, the purpose of this poster is to introduce a new game based peer critique idea, discuss the importance of peer critiques and how using game-based critiques can create enthusiasm for meaningful participation. The authors present this as a new peer critique that can be used in different design studio classes. Participants are (sophomore) interior design students who are enrolled in an interior design studio class.

REFERENCES


Cross-Level Collaboration on Community-Based Experiential Studio Project

Ann Theriot, Baylor University

ABSTRACT

Significant study demonstrates the value of learning-by-doing methodologies to studio-based education, wherein a real scenario facilitates the transformation of a theoretical studio project into a tangible, human-centered product (Zollinger, 2009). Architecture programs rely upon design-build platforms to translate engineering concepts to the construction of a physical structure. Vertical Integration models merge students across multiple academic levels into one studio to collaborate on a single project (Barnes, 1993). Upon inspection interior design education does not have a comparable methodology in which the design process can be applied to create real interior spaces, spanning Programming through Post-Occupancy Evaluation, and allow for collaboration across all grade levels. Several methods involve varying degrees of these components; however, inherent constraints can limit their integration into existing course syllabi, especially within highly sequenced programs. Addressing characteristics of three commonly used experiential methodologies: Vertical Integration, Service-Learning, and Build-To-Learn (See Appendix for definitions of each), this poster outlines a hybrid project currently being conducted at an interior design program housed within a broad liberal arts university. Program deliverables were integrated into five courses, over two 15-week semesters, addressing CIDA standards 7 (Human-Centered Design), 8 (Design Process), 11 (Design Elements and Principles), 12 (Light and Color), 13 (Products and Materials), and 15 (Construction). This project fills a void within interior design curricula by providing an opportunity for each undergraduate academic level to contribute to the full design process of a single community-based project, integrating program requirements tailored to meet diverse course-specific learning objectives. The anticipated results
of this project were that students would mature into a deeper recognition of the relevance of each phase of the design process to their work, and that critical thinking and empathetic-reasoning skills (inherent to service-learning projects) in lower level students would be realized earlier than previously seen. Lastly, like vertically integrated studios, successful adoption of the proposed design project was assumed to require the collaborative participation of the teaching faculty for each course represented. This participatory project is currently ongoing, however preliminary results show that with faculty cooperation it is possible to integrate a single participatory project, relevant to each undergraduate academic level, into studio curricula without restructuring the course sequencing of a school’s design program. Additional outcomes indicate that students experienced the purpose and value of the design process in ways that they had previously not understood, and as a result have productively applied those principles to various design solutions on this and other projects. This project will be complete prior to the 2018 IDEC conference, whereupon student work exhibits from each course will be displayed graphically and chronologically, including programming, space planning, presentation renderings, digital models, architectural finish and fixture specifications, construction journals, lighting/electrical designs, and POE evaluations. Photos of student participation will also be included. This poster’s project is pertinent to design educators because it supplies a need in traditional design studio curricula for cross-level collaboration without restructuring the design program’s core identity. The poster demonstrates the benefits students gain when coordination with a real client is required at each phase of the design process. Unlike service-learning projects, this hybrid model opens the playing field to any client whose program aligns with course objectives, providing new opportunities for interior design programs to integrate learning-by-doing methodologies.

REFERENCES


Design Fundamental Preferences and Influences on Freshman Design Aesthetic

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ABSTRACT

The purpose of this study is to explore freshman interior design students’ perceptions of the aesthetic quality of space. Does the introduction to basic design fundamentals influence preferences over the visual aspects of space? The idea of student-centered learning is fundamental in any examination of modern education for today’s college student. The goal of learning is to go beyond simple acquisition of information to higher levels of learning. Students learn through active engagement constructing knowledge based on the synthesis of design elements. This study provides a look at the development of an assessment tool for measuring changing attitudes over time with exposure to design fundamentals. A common method for determining student achievement is the use of formative assessments. Formative assessments provide valuable feedback and aides in improving instructional practices and contribute to increased student performance. The visual preference survey is a method for gathering data based on the evaluation of photographs. This method of data collection is most commonly used in urban planning research. This study used an adapted version of this survey to gather feedback from a 66 freshman interior design students. Ten images were chosen from popular shelter magazines articles. The images were selected to display different design styles from recently completed interior design projects. Each interior design image was distinct from each other displaying classic to contemporary residential design styles. The images range from a white monochromatic space to an intensely colored and patterned space. The students were surveyed on their second day of class before instruction and design learning began. A second survey was given four weeks into the semester after introduction to basic design fundaments. Three basic qualifiers were
provided for a response. The overarching visual themes present in the images were color, texture, pattern, and space. The study was designed to utilize colloquial language to describe images in the students’ terms and asked the question if they loved, hated, or thought the design was okay. Then, the students were asked to provide further feedback validating the reasoning behind their initial choice. They had 10 qualifiers to use to describe their impression of the designs from “its fun” to “it’s energizing” to “its blank” to its just plain wrong.” The data from each survey was then analyzed using a simple factor analysis method to correlate responses looking for a difference in attitudes and perceptions. In the initial test of the survey as an assessment tool, it provides feedback to the instructors in regard to student’s cognitive development and visual understanding. Further testing is required to see substantial change over the course of the semester. The study will also be expanded to follow the freshman students over the course of their first-year experience. This survey tool has the greater potential to become a valuable tool in the formative assessment of student learning outcomes.

REFERENCES


**ABSTRACT**

The topic of biophilic design has been a growing area of interest with diverse research supporting its inclusion and influence on people since Stephen Kellert brought it into the public eye (2008). This innate need for connecting with nature can extend to influences within the built environment, even viewing natural representations, and has been found to benefit wellbeing (Ulrich, 1981). Biophilic design has been proposed to include more than 70 features (Kellert, 2008) and Kellert identified these features from a landscape design perspective in relating nature to the built environment. His proposition has since been reexamined for its application in interior design (McGee & Marshall-Baker, 2015) and a preference for interiors has been exhibited for spaces with a high variety of biophilic features as identified in the Biophilic Design Matrix (BDM). The BDM focused Kellert’s original list of attributes to 54 interior design features identified in children’s hospital play spaces (McGee & Marshall-Baker, 2015). The findings from the 2015 study were further validated by a study in 2017 that identified health care professionals preferred natural features in children’s hospital play spaces and rated spaces as more preferred that had greater variety of biophilic features as measured by the BDM (Weinberger, et al., 2017). Emotional, physical and spiritual benefits have been found with such biophilic design features and a focus on interior design application is a priority for biophilic design research as it is where people spend the majority of their day (Jones, 1999; Kellert, 2008). With the growing evidence for biophilic design inclusion, however there has not been an umbrella approach to drawing all of this evidence together to guide designers. This presentation will review the background and the findings of an evolving body of knowledge. Through a critical literature review based upon the
BDM key terms, a modified 70 features within six different categories representing environmental features, natural shapes and forms, natural patterns and processes, light and space, place based relationships and human-nature relationships were searched. These features range from direct connection with natural items like water and live animals, to nature representations like fractals and biomimicry. It has been found that there are still many features that are greatly lacking from robust design research while other areas have had greater research attention. The ability for design researchers to use such a list to guide future research can fill important gaps in the knowledge surrounding biophilic design, specifically as it is applied in interior design. As a result of this interior focus, this literature review can allow interior designers to uniquely apply a wide variety of design features to increase biophilic variety. This list can also assist both students and teachers in more easily integrating biophilic design in interior design education while also supporting evidence-based design.

REFERENCES


Virtual space: Is it real?

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ABSTRACT

Relevance/Problem
Interior designers have been studying connections between virtual and real world environments for decades (Lindsey & McLain-Kark, 1998). Recent studies examine how virtual spaces, and social media in particular, serve as places of sociability equivalent to physical third places (i.e., McArthur & White, 2016). Nevertheless, little has been done to establish connections between virtual and physical third places or to develop theory connecting virtual space to real space (Vaux & Langlais, 2017). This study analyzes four social media platforms and texting to examine their representation of current third places and to explore connections between virtual and physical third places. Thus, this project has two goals: 1) to identify and update current third place characteristics and 2) to apply this information in the interiors context.

Context
Although the characteristics proffered by Oldenburg (1999) identify whether physical environments serve as third places, recent studies suggest that non-physical environments, such as virtual environments, can serve as third places. Interior designers need to understand how physical environments might support the need for humans to communicate and socialize virtually. As Perolini (2014) states, “It is important for interior designers to be able to go beyond thinking of interiors as just physical space” (para. 1).

Method
This study employed an integrative literature review method and quantitative methods of analysis. PsychINFO, JSTOR, and Google Scholar were used to search for any journal articles that contained the words “third place,” “close relationships,” and “Facebook,” “SnapChat,” “Instagram,” and “Twitter.” To be included in the review, articles needed to 1) report the results of an empirical study, literature review or meta-analysis, 2) be published since 2004 (the inception of the first social media platform, Facebook), and 3) discuss social media in the context of social space. This search and inclusion criteria resulted in a total of 157 studies. Quantitative data comes from an online survey completed by 323 participants (78.6% female; 91.9% White; Mean Age = 35.9) who answered questions regarding their motivations for using various social media platforms. This approach links social media usage to third place characteristics.

Outcomes
Based on participant responses, Facebook adhered to the majority of third place characteristics, whereas SnapChat and Instagram were linked to only a few characteristics of third places. Twitter was not linked to any of the third place characteristics. According to these quantitative results, some social media platforms, such as Facebook, adhere to third place characteristics, whereas others do not. However, these findings do illustrate that third place characteristics have evolved to include some virtual environments. The main premise of third place theory has shifted as a result of the emergence of virtual third places. This change impacts interior design problem solving and solutions.

Advancement of Design Knowledge
This research raises three factors interior designers need to address in future studies. First, interior designers need to consider how virtual spaces are integrated facets of design problem solving. Second, interior designers need to understand their potential role in designing virtual spaces. Finally, interior designers need to explore and understand theory that undergirds connections between virtual and physical space. This paper provides prototypical examples of design applications relevant to the findings.

REFERENCES


Challenging the status quo: Big Ideas in interior design education

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ABSTRACT

The status quo of Interior Design education is foundational design guided by building typologies that inform design process as well as the requisite supplementary often disconnected courses in colour, lighting, barrier free design, construction, codes/regulations, and sustainability to name just a few. A group of interior design faculty concerned by the impact this approach to design education had on their students, began the process of assessing and reworking the educational model to create a more integrated and holistic approach to interior design education. To inform the curriculum assessment process, research was conducted with over 120 students, alumni and faculty. A mixed method research approach was developed and included: focus groups; surveys; observations of teaching and learning; and an investigation into significant international design education teaching models. The research outcomes, shared and discussed with the faculty, provided evidence and impetus to develop a more streamlined, integrated and holistic interior design curriculum model. It was determined that the structure of this new model was to have studio as the focus of content application for the semester with the core streams design + precedent, systems and design tools becoming the source of content delivery. Each semester was to have a content focus for understanding design through the lense of people with typology supporting the semester focus. The intent was to develop an integrated student understanding of creative, critical and pragmatic thinking that increases throughout the degree from simple to
complex ideas, theories, concepts and spaces. Informed by Idea-Based Learning: A Course Design Process to Promote Conceptual Understanding (E.J. Hansen, 2011) interior design faculty collaboratively identified discipline specific; ‘Big Ideas’ (key learning priorities), ‘Enduring Understandings’ (key knowledge/insights) and ‘Learning Outcomes/Aims’ (key student outcomes). These three components were informed by the foundational areas of focus in each studio in the semester and in turn informed the curriculum syllabi. Through the collaborative process, that led to the creation of a new degree structure, the full time faculty established key foundational areas of focus for each of the eight semesters of study. Each semester builds on the previous concepts, knowledge and skills expanding students’ awareness of interior design in a holistic way. Semester areas of focus are: Studio 1: Space + Experience Studio 2: Inhabitation Studio 3: Spatial Connectivity Studio 4: Collective Studio 5: Context Studio 6: Transformation Studio 7: Investigation Studio 8: Integration Although there are challenges for faculty, the benefits of student confidence, independence and quality of work continue to reinforce the department’s shift to a new way of delivering interior design education. We look forward to graduating students that will have a more holistic and integrated approach to design in the continually blurring edges of professional practice.

REFERENCES

ABSTRACT

As mobile technology has developed, it changes the way in which one occupies, moves, and uses spaces. The interior environment becomes an integrated part of the effects on one’s engagement and interactions. Belk (2013) explains how mobile devices allow one to exist in two spaces at one time. Since mobile devices connect us to friends, family or other social realms, one exists within a social community while, at the same time, being physically present within any surrounding environment. This study explored behavioral effects associated with today’s social interactions and the use of modern technology in museum environments in relation to physical elements within the interior that could cause disengagement of art appreciation in museum galleries. This research builds upon previous knowledge of proximity and grouping within the Gestalt Theory, while specifically focusing on what happens when stimuli compete for representation through the field of vision. McMains and Kastner (2009) reference research by Reynolds, Chelazzi and Desimone (1999) who stated: “studies indicate that stimuli present simultaneously in the visual field interact in mutually suppressive ways. Competitive interactions among multiple stimuli have been found to occur automatically and outside the focus of attention” (p. 2417). If there are multitudes of similar stimuli fighting for attention, then by default the displayed images become dismissible. The same theory applies to the museum environment; when there is a staggering amount of artwork, in a series of rooms repeating over and over again, the environment, and by association the artwork, becomes disengaging, causing the viewer to no longer be immersed in
his or her immediate environment. The arrangement or layout of the gallery and objects within
the gallery play a crucial role in the viewer’s perception. Are the interior environments of art
galleries promoting isolation and disengagement from art appreciation? If so, this is where
interior design becomes an important environmental factor. How could physical features of an
interior space encourage engagement with two-dimensional artwork, as well as foster social
interactions within it, rather than through digital devices? The goal of this research was to
understand which interior environments influence and/or afford one to engage with the artwork
rather than with his or her mobile device. Following evidence-based design practices, the
methods of collecting qualitative data were observations and interviews. Observations conducted
at seven museums in different locations, (New York City, Washington D.C. and Savannah) at
different times of the day and different days of the week were documented through photographs,
diagrams, and notes of both physical surroundings and people’s behaviors. Interviews were
conducted with eight experts in the art exhibition field, including curators, architects, and exhibit
designers. To narrow down uncontrollable variables, this study focused strictly on the display of
two-dimensional artwork. During the observations, many issues caused by the physical
environment became noticeable based on the museum patrons’ behavior patterns. Often times the
user does not utilize the space based on its intended usage. Thus, it is essential to understand how
these interior elements affect people’s perceptions in order to propose more effective design
solution. The findings suggest that the layout of each gallery should include consideration of
proxemics to the pieces of art themselves. Additionally, findings indicate that the human need for
respite from overloaded stimuli should be accounted for within the configuration of gallery
spaces. Attention Restoration Theory (as cited by Kopec, 2012) states that visual images
associated with nature help to provide a sense of visual relief. The proposed harboring
interventions are, then, an example of design strategies to encourage art engagement through
proximity as well as functional spaces for respite.

REFERENCES

477–500.

2012.
Maslow’s Eight-Tier Hierarchy of Needs: The Whispering Protagonist of Human-Centered Design

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ABSTRACT

Problem

The theory of human behavior known as Maslow’s hierarchy of needs is a mainstay in the fields of environmental psychology and interior design research and education. The original frequently referenced model includes five sequential tiers of human needs beginning with the deficiency needs (physiological, safety, social, and esteem needs) which progress toward the fifth need, self-actualization (Maslow, 1943). For reasons that are unclear, interior design research and education, similar to other disciplines (Koltko-Rivera, 2006), has largely ignored the eight-tier system that Maslow and colleagues developed later (Maslow, 1969). This eight-tier system includes the four deficiency needs followed by the four growth needs known as the cognitive, aesthetic, self-actualization, and self-transcendence needs. These four growth needs could also be described as the need to understand, the need for beauty, the need to reach one’s full potential, and the need to help others meet their deficiency needs, growth needs, and full potential. Discussion of this revised Maslow’s hierarchy of needs is absent from the discipline of interior design and deserves attention.
Methodology

The methodology utilized to conduct this research included a review of literature focusing on the eight-tier Maslow’s hierarchy of needs theory, the connection of the theory to aesthetics and interior design in particular, and finally on criticisms surrounding the strict sequential nature of the original and revised theories.

Findings

Research calls into question the sequential pattern of fulfilling the lowest level deficiency needs prior to meeting the higher level deficiency needs and growth needs. Results indicate that the sequence of fulfilling the needs may not be as strict as previously thought, but the deficiency and growth needs are common across cultures (Tay & Diener, 2011). These findings indicate possible applications for the built environment that require nuance and delicacy in the hands of the designer. While the eight-tier theory has started to make impacts in human-centered product design (Zhang & Dong, 2009), the discipline of interior design has not included the revised version of Maslow’s hierarchy of needs. The future incorporation of this latter, and more developed, theory on human behavior could have significant implications for interior design research, education, practice, and advocacy. The cognitive needs of the student, researcher and practitioner drive the individual to understand the needs of the user, to increase the body of knowledge, and refine design practice. Aesthetics needs for both the user and the designer elevates the research, education, and practice of the artistic, decorative, and graphic nature of interior design. The highest-order need, self-transcendence, could impact practitioners as they address their clients’ deficiency and growth needs, especially with projects that focus on the societal greater good. Additionally, causes of high levels of professional fulfillment and job satisfaction for interior designers could find a correlation with Maslow’s revised needs hierarchy. Lastly, advocacy for the interior design profession and the impact of the built environment on psychological well-being, particularly in educating the public and legislative bodies, is
strengthened with the incorporation of this more developed version of Maslow’s hierarchy of needs.

REFERENCES


Havana: Behind the Façade – Historic Preservation in Havana, Cuba

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ABSTRACT

Introduction
Havana, Cuba is a time capsule of buildings known to mirror its rich history. With limited materials and resources, Cuban artisans use unique preservation methods to conserve a priceless legacy of historic architecture stretching five centuries (Havana Heritage Foundation, 2017). This paper addresses the following questions: 1) what are the characteristics and influences of Cuban Architecture? 2) what unique conditions place Cuban Architecture in detriment? 3) what activities are being used to preserve this architectural legacy? This project, Havana: Behind the Facade, sought to understand the unique challenges of the Cuban people and how these challenges apply to architecture and preservation efforts.

Methodology
This ethnographic study was accomplished by participating in a residency program with Unpack Studio-Havana, allowing for 4 uninterrupted weeks of fieldwork focusing on primary data collection. A photo documentary series captured the overall condition of Havana’s architecture and the labors of those working to preserve it. Preservationists, curators, and craftsmen were observed and interviewed. In addition, time was spent inside preservation trade schools to document how students are learning traditional preservation methods. Daily field notes recorded findings and were used to deduce conclusions.

Findings
Havana’s architecture falls into three periods: Colonial, Republican, and Post-Revolution. The Colonial period is Spanish Baroque and Neoclassical forms with Moorish details. The Republican period coincides with Cuba’s independence from Spain and takes the forms of Art Nouveau, Art Deco, and Art Moderne. Post-revolution architectural forms, heavily influenced by the Soviet Union, become massive, blocky, prefabricated structures that are absent of ornamentation. Today, the one thing they all have in common is extreme decline. Three buildings collapse every day in Havana. The architecture is naturally endangered due to the tropical climate and salt air, combined with the constant threat of hurricanes (Havana Heritage Foundation, 2017). This is compounded by a lack of economic and material resources, due to the American embargo, as well as building modifications made to meet post-revolution housing conditions. Cuba’s Office of the Historian works to preserve this cultural and architectural heritage. Unfortunately, the number of beautiful buildings in full decay is countless. There are two Havanas: one for tourists and one for Cubans. Preservation efforts reflect this sentiment. The Office of the Historian has a unique model of preservation that focuses on generating tourism dollars that are reinvested into further historic preservation. This effort focuses on the 5 squares in the historic section of Havana and the corridors that connect them. In addition to hotels, restaurants, and museums, tourism dollars are invested into schools, medical facilities, and public offices (Dauphin, Hughes, Menard, & Patterson, 2017; Farber, 2017). In contrast, the nearby residential corridors contain historic buildings in deterioration. A housing shortage has forced residents to haphazardly add building additions, including built-out balconies, rooftop shanty towns, infilled courtyards, and mezzanines in spaces with high ceilings. These modifications result in structurally unsafe buildings prone to collapse. Due to the limited resources, creative recycling is necessary. Collapsed buildings are scavenged materials that are reused in innovative ways. Conclusions Bisley (2016) describes Cuba as the most complex, contradictory, confounding place he ever visited. This observation also reflects the complexity of Havana’s approach to architecture. Though many buildings are being restored, hundreds are suffering from demolition by neglect, yet the resiliency of the Cuban people is evident as they make do with and live in buildings that would be condemned.

REFERENCES


Expanding Cultural Intelligence through Various International Design Experiences

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ABSTRACT

To celebrate culture and foster inclusion designers must have well-developed Cultural Intelligence. “Cultural intelligence (CQ) [as measured by the Cultural Intelligence Survey, CIS] captures (the) capability for adaptation across cultures and it reflects a person's capability to gather, interpret, and act upon these radically different cues to function effectively across cultural settings or in a multicultural situation” (Earley & Peterson 105). The Council for Interior Design Accreditation standards emphasizes the topic of “Global Context” in Standard 4 stating that “Interior designers have a global view and consider social, cultural, economic, and ecological contexts in all aspects of their work” (II-16). Common educational experiences ID programs use to address these requirements are study abroad programs or internationally based projects with programs and users that differ culturally, socially, and economically from the student population. Evidence shows that students who study abroad improve their Cultural Intelligence, however, little formal research verifies that internationally-based projects without travel accomplish similar goals. Discussions about the various educational strategies used to expand CQ prompted the research team to generate a studio project pairing a studio cohort that was not able to study abroad with one that could to work on the same globally sited project. Three other study abroad cohort groups completed significantly different projects. Three research questions emerged: 1. What change is evident in pre- and post-travel CQ scores among students studying abroad for a full semester? 2. What change is evident in pre- and post-travel CQ scores among students studying abroad for a five week summer session? 3. What change is evident in pre- and post-project CQ scores among students who did not travel abroad. The CIS instrument, used in both
business and academic venues, was selected to address research questions and organizes one’s CQ profile into four capabilities also aligning with the CIDA objectives: 1. Drive – interest, drive and confidence to adapt to multicultural situations. 2. Knowledge – understanding about how cultures are similar and different. 3. Action – ability to adapt when relating and working interculturally. 4. Strategy – awareness and ability to plan for multicultural interactions. At the beginning and end of academic terms Spring 2016 and Summers 2016 and 2017 students among seven different groups completed the CIS survey. Students included those studying in a school of Architecture and Design (University A) and a school of Human Environmental Sciences (University B). Group 1 – Spring 2016 semester in Rome Group 2 – 2 week intercession in Cambodia, plus Spring 2016 semester-long project based in Cambodia but completed in residence at University A. Group 3 – Spring 2016 semester-long project based in Cambodia but completed in residence at University A. Group 4 – Spring 2016 semester-long project based in Cambodia but completed in residence at University B. Group 5 – Six week summer 2017 session traveling through Italy, France, and Great Britain. Groups 6 and 7 – Five week summer 2016 and 2017 sessions in Rome. Pre and post analysis of the groups showed increased CQ scores at both Universities, across all groups. For the students studying abroad for five weeks or more, there was a significant improvement of CQ (14.5% - 17.5% increase). While traveling abroad provided the greatest increase in scores, the study revealed that an international study experience without travel can also improve CQ (7.5%-9.5% increase) suggesting that internationally based projects can be beneficial whether they include travel or not. The proposed presentation will share a detailed analysis of the four categories of CQ scores across the subject groups, as well as, additional details about the projects, cross-university collaboration, and outcomes of each group.

REFERENCES


Case and Point: Transforming the B-School, Designing for a new millennial culture

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ABSTRACT

Purpose
Academic success hinges on student engagement; however, engaging the millennial, has proved elusive for faculty and administrators alike. This cohort wants technology-driven on-line learning environments that extend beyond the classroom walls but see value in being a part of face-to-face communities. While, technology has democratized learning, the downside to flexibility is the reduced need for students to be present on campus. Further, millennials have shown a preference for informal learning environments that enhance socialization with peers and professors (Pardue & Morgan, 2008; Skiba & Barton, 2006). These emerging facilities are becoming more common on universities but there has not been much research in this area. The purpose of our study is to examine an emerging spatial archetype, the mixed-use learning zone, in the university context. This was accomplished by evaluating faculty, staff and student reactions to mixed-use learning environments intended to support millennial ways of thinking and doing, while measuring the ability of this facility to support a culture of student engagement.

Method
This study investigated the impact of a mixed-use learning environment in a top 10 public research university campus: a newly designed graduate business school with a large millennial cohort. Our research team used mixed methods to examine student learning preferences and behaviors as well as perceptions of key administrator, faculty, staff, and other stakeholders across
the research process. The study gathered data by surveying a national online community of
millennial to gather perceptions on preferences for on campus learning spaces; conducting on-
site, on-the-spot intercept surveys with graduate students; collecting on-site behavior mapping in
a range of classrooms and learning environments; gathering interviews with faculty,
administrators and staff; and developing overarching themes on student learning preferences
through visual and interview-based narrative inquiry.

Conclusion
Findings revealed the value of community-forming mixed-used learning environments for
millennial students. In the graduate business school, both advantages of the new culture surfaced
as did challenges. Collaborative learning spaces have proven successful in fostering casual
collisions, promoting a sense of community, and are essential to supporting project-based
teamwork. Ironically, rooms designed to maximize flexibility were underutilized. Almost
unanimous support existed for the expanded team spaces but to the dismay of some students the
new space did not contain enough dedicated individual study areas. While a primary role of the
new building was to encourage engagement outside of scheduled classes, points of tension arose
when inappropriate uses of the facilities occurred. Based on the findings, our multidisciplinary
team created an original typology with constructs offering a better understanding of
transformational opportunities in mixed use learning environments. The typology proposed four
categories of spaces characteristic of redefined college learning environments: 1) “Pride and
Purpose Places”, 2) “Pro Zones”, 3) “Nested Learning Spaces”, and 4) “Chill Zones”. To
illustrate the typology, we will share a series of stakeholder narratives using original 3D virtual
tours, interview film clips, and written stories documenting experience. While the millennials are
the first generation of digital natives (Seppanen & Gualtieri, 2012), it was notable that they also
insist on face-to-face connectivity in their learning environments. This case focuses on aspirations
and realities of designing a new building meant to create a strong sense of community with a
predominately millennial student body, and its findings offers insights for design researchers,
practitioners and client groups facing similar challenges.

REFERENCES

and implications for nursing education. Nursing Education Perspectives, 29(2), 74–79.

Suspending Expectations: Effect of culture, geography, and contextual relationships on seating arrangements in cafés

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ABSTRACT

In a global community where the design of the built environment is culturally diverse, how do we ensure that we are inclusive? Further, how do we interpret research without allowing our own cultural bias to affect our interpretation? Human behavior is influenced by sociocultural worldviews (i.e., fundamental belief structures formed by cultural experience). In our 21st Century global community, designers must continually investigate these cultural and social differences in order to understand human behavior and make appropriate design decisions. This requires us to dig deeper and go beyond the basics. In order to so we must go beyond what is being observed, and ask why. In other words, by suspending our expectations, we are more accurately able to truly understand contextual relationships between design and human behavior.

Research problem How does social connectivity manifest itself in seating arrangements and body positioning based on the sociocultural differences between North America and the Middle East? As designers in a global community, do we interpret spatial arrangements without truly understanding cultural norms and influences?

Research Aim
The intent of this study is to understand how and why the design of cafés, specifically seating arrangements and usage vary based on cultural differences between geographic locations in North
America and the Middle East, specifically, Turkey, Iraq, and the United Arab Emirates (UAE). Considerations include differences in gender roles, socio-economic status, and social norms.

Methodology
This study investigates culture and contextual relationships as they apply to seating arrangements and body positioning. Using ethnographic research methods (i.e., direct observation of site and user behavior), photographs are used to document seating arrangements in various cafés, both interior and exterior. The results are then compared to expected human behavior in terms of physical positioning and theories related to territoriality and privacy, obtained through a review of literature. Deviations from expected results are then analyzed based on potential cultural differences (e.g., gender roles, status, etc.)

Analysis of outcomes: Initial findings indicate seating arrangement and positioning vary not only between western and eastern cultures, but within Middle Eastern regions as well. For example, more traditional regions in the Middle East limit opportunities for women in social settings, hence the seating layout and physical positioning is derived from a male perspective. Other regions or transitional locations (i.e. Istanbul and the UAE) allow for analysis of both male and female behavior. In addition, initial findings indicate that the concept of family and female privacy are more preserved in the Middle East than in North America. For example, the communal tables found in some Western brand cafés (e.g., Tim Hortons and Starbucks) located in the UAE and Istanbul are not utilized. Subsequent analysis indicates that contextual relationships are strong in the Middle East and the concept of personal space is more intimate compared to Western cultures. Sociopetal arrangements (i.e., those encouraging personal engagement) are found in the Middle East, although they manifest themselves differently than those found in western cultures. For example, cafés in the Middle East locate outdoor seating facing outward to the street. From a western perspective this would be considered a sociofugal arrangement, discouraging personal interaction. However, when viewed under a culturally sensitive lens, it becomes clearer that personal interaction in the Middle East is more social in nature. Hence, personal interaction is less individual and more community based as a cultural norm. The implications of this study affect more than just the design of spaces for social connectivity within different regions and cultures, but also when intercultural interaction needs to occur.
REFERENCES


Business Traveler Preferences: Hotel Design and the WELL Building Standard

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ABSTRACT

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

Background
Business traveling allows companies to conduct business negotiations more effectively, facilitate knowledge transfers between multiple company locations, attend trainings or large conferences to gain more knowledge of a particular industry as it grows or changes, and conduct other important business operations (Mäkelä, Kinnunen, & Suutari, 2015; Burkholder et. al, 2010). Thus, it becomes imperative to provide hotel accommodations that can best meet these business travelers’ needs while enriching their travel experience. Stress related to business travel often leads to health concerns, such as sleep deprivation, unhealthy diet, anxiety, weight gain, susceptibility to allergies and illness, and depression (Chen, 2017). Business travel stress triggers occur during three travel phases: pre-trip, destination, and post-trip (Chen, 2017; Carlson Wagonlit Travel Solutions Group, 2012). This study placed an emphasis on the destination phase of business travel. The WELL Building Standard is a building standard and certification/rating system that
focuses on human health and well-being (International WELL Building Institute, 2016). This standard was first launched in 2014, and as of 2016 there are 100 certified WELL projects in twelve different counties (International WELL Building Institute, 2016). No WELL pilot program for hospitality spaces has been published at this time. Therefore, one of the goals of this research was to lay a foundation of design guidelines that correspond with the WELL Building Standard to inform a future pilot program.

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

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


The Influence of Engaging Interior Environments on the Blood Donation Experience

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ABSTRACT

Despite a significant demand for blood donations both nationally and globally, it has become increasingly difficult to recruit and retain blood donors. Extensive research indicates that reluctance to donate blood is associated with its stressful experience especially for first-time donors; in particular, physical discomfort from blood drawing (e.g., fear of needle, pain, dizziness, nausea) and emotional unpleasantness from seeing blood being drawn (Fergusson et al., 1997; Hinrichs et al., 2007). Furthermore, a great volume of healthcare research on stress found a substantial mediating role that physical environment can play in alleviating or aggravating patients’ stress; however, little is known about the effects of the physical interior environment on blood donation experience (Lazaus, 1993; Malenbaum et al., 2008; Ulrich, 1981). Inadequacy in understanding how people perceive physical design features may fail to recruit blood donors in spite of their willingness to give blood and save lives. This study focused on young adults’ perspectives of blood donation environments. In particular, the main research questions were: 1) How do young adults feel about blood donation? and 2) What environmental factors or physical design features tend to positively or negatively influence blood donation experience? Using a semi-structured survey, both quantitative and qualitative data were collected from 350 college students (age range from 18 to 31 years) who rated the physical environmental quality of four blood and infusion sites. Findings showed that students perceived blood donation stressful to some degree (never 39.41%, occasionally 44.11%, frequently 8.24%, very 8.24%) because of
fear, pain, seeing blood drawn, and environmental quality of the donation site. Majority of the students tended to cope with stress from blood donation through relaxation (27.96%) and positive distractions (51.44%) such as viewing outside, listening to soothing music, and talking to friends or people around. Indeed, students valued a warm and comfortable interior environment which offered natural light, external garden view, privacy, space for family or friend in close proximity, and was nicely furnished, spacious, and clean which would alleviate stress from blood donation. Adversely, people’s stress were likely exacerbated by lack of privacy, poor space layout (e.g., too crowded or too open), impersonal environmental senses (e.g., bright and harsh lights, white tiles and colors), outdated furnishings, and cold and sterile atmosphere. In addition, blood donation sites rated lower were perceived to provide unsafe quality of care to blood donors. This study suggests that optimal blood donation environments need to be designed not just to be warm and comfortable in appearance, but to also recognize donors’ sensibilities to be cared for in relaxing and engaging environments.

REFERENCES

Lighting for Senior Living: A Study of Older Adults’ Perceptions of Color Temperature

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ABSTRACT

This research evaluates the effects of light’s correlated color temperature (CCT) on responses of older adults to their interior environment. When lighting or daylight access is inadequate, nursing home patients experience imbalanced circadian rhythm, which is associated with depression, cognitive and functional problems, and cardiovascular issues (Brawley, 2009). With advancements in LED technology, artificial lighting’s spectrum of CCT has become a powerful tool for designers to combat these negative effects. At the beginning of lighting psychology research, John Flynn and colleagues documented incandescent and early fluorescent light’s influence on human behavior, finding that an individual’s psychological and physical environment are impacted by interior lighting, eliciting different behavioral responses and creating personal environmental connections (Martyniuk et al., 1973). Spaciousness, pleasantness, and relaxation or tension are a few emotions influenced by artificial lighting design (Martyniuk et al., 1973). Current research indicates CCT directly affects behavioral and neural responses of individuals (Amor et al., 2015) and CCT may also be used to improve feelings of sadness or anxiety in older adults (Kuijsters et al., 2015). Other research on CCT’s impact focus on non-visual effects or utilize older lighting technologies, therefore there remains a need to further examine subjective impressions of newer LED lighting technology. The rapidly growing elderly Baby Boom population, with an expected 72.7 million adults over 65 years old by 2030 in the United States (Ortman and Velkoff, 2014), has magnified the importance of residential healthcare lighting design, which can contribute to quality of life in their living spaces. Some
long-term (LTC) and continuing care retirement communities (CCRC) lack adequate lighting design strategies; therefore, not meeting the needs of older adults may result in feelings of being displaced, unhappy, and uncomfortable. These facilities often plan for resident apartments along the building exterior, pushing common spaces to the inner core, where it is more difficult to incorporate natural light. This research examines subjective responses to different CCT in a senior living facility community room, without daylight, to better understand connections between lighting, emotions, and preference. Over four sessions, twelve independent living residents of a senior living facility provided their subjective responses to four lighting conditions, with similar CRI and lumen outputs: existing (2700K CFL) and LED replacements lamps (3000K, 4000K, 5000K). Evaluations occurred in a community room that has no daylight. During each session, residents responded to interview questions about their preferences and experiences with lighting and completed a survey with Likert scale questions about the room, the lighting, and how they felt in the space. These results confirm conclusions from Martyniuk et al. (1973) and Kuijisters (2015) that lighting influences emotions and feelings toward interior environments. The senior living residents generally responded positively to the 2700K, 3000K, and 5000K lighting conditions, however there were mostly negative responses to the 4000K condition. Residents rated the 4000K lighting as cool, unappealing, glaring, and they expressed feeling anxious and alert (rather than peaceful). All other conditions were described as warm or neutral, non-glaring, and more appealing than the 4000K condition. Surprisingly, participants described the 5000K light as warm, which may be due to its resemblance to daylight, a more familiar and desirable quality of light. This research adds to the body of information from which interior designers can develop and build human-centered healthcare interiors specifically to meet physical, behavioral, and emotional needs of older adults.

REFERENCES


Unleashing student voices on a college campus: A Post-Occupancy Evaluation for a STEM Building in Higher Education

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ABSTRACT

Active and collaborative learning spaces, whether within or outside the classroom setting, impact student engagement (Fischer, 2016). As tighter budgetary constraints impact campuses nationwide, little research has been undertaken to identify key design features that can influence student learning experiences in direct and important ways. A building dedicated to science, technology, engineering, and mathematics (STEM) education is the focus of this post-occupancy evaluation (POE). Opening January 2016, the three-story, 109,000-square foot structure is designed to enhance student learning through active learning classrooms, labs, and collaboration spaces. The structure features flexible classrooms with mobile furnishings, group tables, enhanced technology, multiple screens, and white boards that move students and faculty away from traditional teaching methods. Student collaboration spaces include open lounge seating, study alcoves with white boards, and enclosed study rooms. An estimated 4,000-5,000 students use the building daily. Classrooms are available to students during the evening hours for study
time, group activities, and club meetings. Initial results of the POE reviewing student collaboration spaces and active learning classrooms will be presented. The POE examines how the building is meeting the needs of the students through a mixed methods approach to identify classroom features that support student collaboration and student-faculty interaction as well as how collaboration spaces support learning activities outside the classroom. An online survey, distributed through a campus-wide student list-serve, found classrooms that included large group tables, white boards, multiple projection screens/monitors, and mobile seating were the preferred educational environment for today’s learners. This was further supported by responses to open-ended questions regarding student learning experiences in the STEM building. Student comments consistently identified mobile furniture, technology access, white boards, and flexible room layouts as unique elements that set their learning experience apart from other educational experiences on campus. Collaboration spaces outside the classroom were used by students several times a week, with many areas supporting small group activities. A sustained thematic thread regarding collaboration spaces found in the open-ended comments across all student groups was the demand to increase the number of study tables. Behavioral observations focused on student collaborations spaces were completed over a two week period at various times of the day and on different days of the week during one semester. Observations reflected that open seating, study alcoves, and enclosed study rooms were heavily used throughout the day with students most often engaged in individual vs group study activities. In those areas that included white boards in study alcoves, students were typically engaged in small group activities. These findings are supported by the data collected in the survey across all class levels that indicated study alcoves served as the primary area students would gather to complete small group study or work sessions. The seating or study options areas that did not have student use where those areas close to a primary building entrance or on a circulation route.
REFERENCES


LuxMotus Pavilion: A Case Study in Physic-based Digital Fabrication

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ABSTRACT

Context
This project demonstrates how parametric modeling techniques can be integrated into the conceptual stage of design-build studios, and used as a basis for developing new approaches to digital fabrication. Previous studies have shown that parametric modeling can have substantial benefits when used as a drawing-generator for digital fabrication; most notably it can enable the designer to experiment with numerous new design and tooling possibilities (Jabi, 2013). The use of parametric modeling to inform these processes has also been described as initiating a “psychological change” in designers’ approach to form-creation, and it is often seen as leading to a more adaptive and responsive design outlook (Achten & Kopriva, 2010).

Method
The design-build studio that formed the basis of the current study was executed in four phases: (a) inspiration through nature leading to form-generation, (b) tessellation exploration, (c) assembly techniques and connection, and (d) fabrication. First, we examined mathematical analyses of naturally occurring geometric designs. This helped the students to better understand the basic concepts of parametric theory. Using this natural inspiration we then sketched out a basic pavilion design using a coordinated parametric formula, and explored the possibilities of the design using 3D-modeling software.
Design and Fabrication
The form of the pavilion was developed using a parallel process of digital form-finding (parametric modeling tools) and analogue form-finding (physical models). The basic shape was created using parametric methods, and then we explored tessellation systems based on the Voronoi algorithm. One of the challenges in fabricating Voronoi-based tessellation is the complex assembly process that is often required. In our final tessellated form, for example, we had 98 Voronoi cells comprised of three- to six-sided polygons, all with different angles of assembly. This challenge led us directly toward a consideration of creative assembly techniques for the structure. Eventually we settled on a spring-based computational model (Lienhard et al., 2013) to help fabricate the pavilion. Inspired by Gaudi’s form-finding and structural optimization, we designed a flexible mesh consisting of Voronoi cells. We digitally evaluated various possible form relaxations for the structure, and determined optimal anchor points from which we could hang the dynamic mesh, allowing gravity to help shape the form. After the mesh was hung, we fabricated metal bars to replace the flexible mesh connections, thereby solidifying the organically shaped structure. Finally, the structure was disassembled, flipped upside down, and re-assembled in an upright position as a pavilion. We used a Spandex fabric to create covered components within the Voronoi cells, providing a more enclosed feeling for the structure.

Outcome
The most significant outcome of LuxMotus project is to demonstrate that parametric modeling is not only useful for form-generation, but also can be a valuable tool to develop new fabrication techniques. The project is a result of computational design thinking that includes elements of biophysical morphogenesis, algorithmic and mathematical approaches, and the cutting-edge translation of such approaches into physical fabrication. Potential applications for this approach to design include the physics-based assembly and structural optimization of organic and complex forms, and the use of such structures in reconfigurable material systems.

REFERENCES
Shifting School Design to the 21st Century: Challenges with Alternative Learning Environments

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ABSTRACT

The design of American schools is based on social and societal constructs focused on conformity and standardization established during the Industrial Revolution and modeled after industrialism, grouping students by age and educating them by the masses through the dissemination of knowledge (Robinson). Educational research has indicated a pedagogical shift from the standardized teach-to-test, one-size-fits-all approach to collaborative and interdisciplinary teaching that is personalized to support the different ways students learn (Arieff). In their 2014 research publication titled “Active Learning Spaces”, Steelcase reiterates the transitional challenges for our schools, saying: For the first time in decades, [schools] are making significant changes in how they teach. Educators are exploring what it means to be learner-centric, adopting active learning pedagogies and embracing technology that supports varied educational strategies…yet both students and educators still face the challenge of having to operate in facilities built for age-old ways of learning and teaching. (Steelcase Education) The architects and designers of 21st century schools are faced with significant design challenges to positively impact the future of learning environments. A new model of customization would offer student-focused instruction in smaller networks of highly personalized education based on 21st century skills including collaboration, interdisciplinary thinking, and technology integration (Horn; Jones, Jo, and Martin). This thesis focused on secondary education and examined three high schools that vary in curriculum, program requirements, size, and site context but are all professionally recognized for their innovative designs by either the American Institute of Architects Committee
on Architectural Education and/or by the Association for Learning Environments’ James D. MacConnell Award. These schools include E3 Civic High School in San Diego, California; Vashon Island High School in Vashon Island, Washington; and Fairchild Wheeler Interdistrict Magnet Campus in Bridgeport, Connecticut. A case study was conducted using a mixed methods approach to analyze the three schools and their inclusion of alternative learning environments. The first phase was an internal review consisting of a quantitative analysis of the learning environments in each school that included the types and sizes of spaces as well as a comparative analysis of the cumulative size of each space and program. The second phase was a questionnaire sent to all faculty, staff, and administration at each of the high schools assessing the qualitative and quantitative characteristics of the learning environments provided at each school. Responses indicated an overall satisfaction and perceived importance of the inclusion of alternative learning environments in schools today as well as indications of design elements that yielded conflicting or unsatisfactory responses. Most respondents provided higher satisfaction ratings for their classrooms, labs, and studios – the spaces most indicative of the traditional classroom designs. The informal and collaborative spaces incorporated to further support 21st century learning yielded the lowest overall satisfaction ratings, with the respondents least satisfied with the organization of their spaces. As schools shift to accommodate 21st century needs, continued evaluation and exploration in the design of alternative learning environments can help alleviate the discrepancy that exists between learning methods, teaching methods, and the design of the spaces to support them.

REFERENCES

Horn, Michael B. “The Past, Present and Future of School Design (EdSurge News).”
Steelcase Education. “Active Learning Spaces.” Insights, Applications, + Solutions
A Case Study Examining How Classroom Lighting Influences Teacher Productivity

Alana Pulay, Oklahoma State University
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ABSTRACT

Public school teachers have a challenging job that requires dedication and flexibility to meet the daily demands of promoting student academic success. Teachers spend a tremendous amount of time, anywhere from 8 – 12 hours a day, in school facilities that are out of date and of poor building quality with inadequate interior lighting, poor acoustics, bad indoor air quality and outdated furniture. The quality of the school building directly relates to whether teachers feel appreciated (Cheryan, Ziegler, Plaut, & Meltzoff, 2014), thus contributing towards their motivation and productivity level, which is defined as, “a contribution towards student learning” (Schalock, 1987, p. 61). Limited studies have been performed that examine teacher productivity in regards to school building quality or interior lighting. It is known that the quality of the built environment influences worker productivity in the workplace (Hawes et al., 2012) yet the influence of the classroom built environment on teachers is unknown. Our research objective examined teacher attitudes about their classroom to uncover if it influenced their perceived performance level. Our central hypothesis is that the interior lighting, which influences the perceived quality of the building, also contribute subliminally towards teacher performance (Knez, 2014). Our hypothesis has been formulated based on the existing literature demonstrating that workers are more productive and take less sick days in perceived higher quality buildings (Hawes et al., 2012) with appropriate interior lighting designed for their specific task (Knez, 2014). This research study consisted of two parts. First IRB approval was obtained, then we inventoried variables within public school classrooms across the state. This documented interior lighting with finishes and materials which contribute towards building quality. Inventoried data
was analyzed using constant comparative methods to classify classrooms into three building quality types of high, medium, and low. All of the inventoried classrooms had 2’ x 4’ troffer fluorescent lighting fixtures. For the second part of the study, we administered a survey to 127 Family and Consumer Science (FACS) teachers. The survey was based on the Teaching and Learning International Survey (TALIS) that uses a Likert scale to gather teacher attitudes and perceptions of the classroom interior lighting, windows and views (He & Van De Vijuer, 2015). The survey also documented cognitive load of teaching tasks, school climate, and teacher attitude in addition to demographic information and self-reported number of sick days which gave us data on perceived performance levels. Data was imported into SPSS and analyzed. Results indicated that teaching tasks require a high cognitive load; however, participating teachers are satisfied and feel supported by the community, their administration, and their colleagues. 71% indicated that poverty is a problem at their school yet this didn’t match the inventoried classroom variables that displayed a relatively high building quality. 85% of respondents stated that they were satisfied with the amount of interior lighting in their classroom but were not satisfied with the amount of lighting control. 48% of respondents stated they did not have an appropriate amount of windows in their classroom but 61% of respondents stated that they were satisfied with the amount of natural lighting and not many respondents had an issue with glare. While this study has many strengths in documenting teachers’ opinions of their classroom environments there are conflicting results which warrant additional studies. A limitation of this study is the limited sample size of FACS teachers that have a different pedagogy and curriculum than teachers of other subjects. Additional studies that document teachers in other disciplines will strengthen the results and allow us to draw conclusions. Further investigations on this subject are needed.

REFERENCES


Active Design: Creating a Blue Zones model for interior environments

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ABSTRACT

How might interior environments play a role in promoting lifelong well-being? According to Passarino, et al., genetic variety only accounts for about 25% of the variation of human longevity. A combination of diet, environment and exercise comprise the greatest factors. The amount of time Americans spend indoors presents a challenge to increasing physical activity: the Environmental Protection Agency (EPA) states that Americans spend 93% of their lives indoors (Roberts, 2016). Therefore, if physical activity is crucial to living longer, the design of interior environments could logically be a critical factor in promoting natural movement while sustaining lifelong well-being. National Geographic Society fellow Dan Buettner (2015) identified five “Blue Zones” in the world where people naturally live longer. These regions have high concentrations of centenarians who have grown old without noticeable signs of heart disease, obesity, cancer or diabetes. Buettner identified nine common principles that universally characterize well-being in the Blue Zones. The first, and most crucial to design in the built environment, is to “move naturally.” Healthy centenarians, Buettner says, “live in environments that constantly nudge them into moving” (p. 20). This research seeks to apply Blue Zones principles that promote human health and well-being through natural movement in the built environment, creating a catalyst for change in interior environments.

METHODOLOGY AND PROGRAM

A literature review and case studies are presented to show a link between natural movement and increases in healthy outcomes, particularly in the design of stairs. Field interviews in Joensuu and
Helsinki, Finland explore the results of a public health initiative that addresses a range of environmental factors in promoting measurable increases in well-being. A site visit to the Well Living Lab in Rochester, Minnesota, observes research in the world's first lab for studying the effect of interior design on human health. The rich traditions of the Japanese tea ceremony were used to design built elements in this project while principles such as wabi-sabi, kintsugi, and boroboro, which are derived from Zen Buddhist philosophy, define materiality. Tai Chi, a martial arts practice, mimics natural movement and offers “both a physical component as well as a sociocultural, meditative component that is believed to contribute to overall well-being” (Yau, 2008). The tea ceremony and Tai Chi embody the slow and steady Zen Buddhist mind-body philosophy that mirrors the daily rhythm of life in the Blue Zones. A three-part program includes four residential apartments, a Japanese tea room and a Tai Chi studio. A two-story atrium upstairs and Japanese-influenced entry gate connect the major program spaces and provide opportunities for socializing.

RESULTS AND CONCLUSIONS

Interior design that boosts regular natural movement occurs mostly in the design of a building’s major circulation systems and its program (Center for Active Design, 2010). Elements such as stairs promote movement when they are visible, safe and attractive. Programmed spaces that encourage healthy mind-body rituals and promote healthy diets also lead to increased well-being. Blue Zones residents de-emphasize modern conveniences in daily life. They walk more and drive less, use hand tools whenever possible, cook at home, and do their own chores. This greater effort adds years to their lives and measurably enhances their mind-body balance. Using these guides, a 20,000 sq ft brick warehouse in a mid-Atlantic city has been redesigned as a micro-Blue Zone to use as a model for promoting lifelong well-being. This two-level adaptive reuse, mixed use project addresses vertical transitions, social spaces, daily rituals and healthy eating choices while offering many opportunities for natural movement.

REFERENCES


“Tai Chi Exercise and the Improvement of Health and Well-Being in Older Adults,” Matthew Kwai-sang Yau. (pp. 155-65). In Hong, Y. Editor (2008). Tai chi chuan: state of the art in international resear

Open Track | Scholarship of Design Research | Presentation

The Impact of Biomorphic Design on the Memorability of Interior Environments

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ABSTRACT

Interior Designers believe that a memorable design gives meaning to an environment, and creates a more engaging experience through the built environments (Astorino, 2010; Dohr & Portillo, 2011; Goulding, 2000; Boyd & Allen, 1981). They view design as an experience, which creates a connection among elements, settings, roles, and people (Dohr & Portillo, 2011). The primary hypothesis for this study is: Images of environments primarily containing elements of biomorphic architectural design (inspired by organic shapes and forms) are more intrinsically memorable than images of environments that primarily contain elements of formal rectilinear minimalist design (characterized as simplified designs with “rectilinear” forms, the use of boxes, and the rejection of ornament and decoration). If one style of design proves to be more memorable, that should help designers add more meaning, and create a more engaging experience. In addition, the findings and methodology of this study open a new path to future discoveries in evidence-based design approaches, including environmental design research for people living with Mild Cognitive Impairment (MCI) or Alzheimer’s disease. Framework of exploration This study used a scientific/hypothetico-deductive (O’Leary, 2013) approach to investigate the impact of architectural design elements on the memorability of designed environments, using a cognitive memory task. The experimental design of this study was based on a standard stimuli-within-condition method (Westfall et al., 2014). Participants performed a series of tasks related to memorability, using a standardized set of images of interior designs. First, a matched set of images of interiors with biomorphic and formal rectilinear was methodologically developed using
a set of normative and standardized stimuli that controlled potential confounds in this study (Fig. 2). Selection criterion was based on three steps: using a panel of experts to categorize the design of the images, performing a norming study to evaluate design attributes of the images as confounding variables, and the execution of two pilot studies. Once the image set was developed, sixty-eight volunteer students completed the study individually. The cognitive memory task involved asking participants to perform two computer tasks in two phases: a learning phase and a testing phase. During the learning phase, participants looked at images containing half of the biomorphic and half of the formal rectilinear interior design images. In between the two phases, as a distracting activity to shift attention away from the interior design images, a short-term memory test was conducted to measure the participants’ short-term memory baseline. In the second phase of the experiment, participants’ recognition memory of old or new environmental designed images was tested (Fig.3), using a combination of images that had previously been seen, mixed with new images. To analyze the data, a General Linear Model (GLM) was fitted to predict the intrinsic memorability of interior designed images in the two categories of biomorphic and non-biomorphic designed environments (Fig.4). Conclusion Results showed that the elements of biomorphic design increased the intrinsic memorability of the images by 0.073 unit in comparison with the images that contain non-biomorphic design elements, $b = 0.073, t(58) = 4.034, p < .001$ (Fig.5). Therefore, this tended to support the hypothesis, and examining individual cognition memory task showed that the images of environments primarily containing elements of biomorphic design were more intrinsically memorable than images of environments that primarily contained elements of formal rectilinear minimalist design. Findings of this study give designers useful information on the role of architectural design elements on human memory and memorability of designed environments. Moreover, the findings could be beneficial for landmarks design inquiry in way-finding and navigation studies.

REFERENCES


A Pilot Study Examining Student Opinions of Classroom Furniture for Collaborate Technology Use

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ABSTRACT

While educational advocates have championed systems thinking as it applies to schooling, pedagogy and various teaching and learning practices, the learning environment where these activities take place remain consistent, creating challenges for those attempting to implement technology in the classroom especially in collaborative class projects and assignments. Collaborative technology use is recognized as an active learning tool that involves others present in the space, learning collaboratively and collectively (Smith, 2004) each on their own computing device. While the link between classroom space and learning is not new, there is limited literature on classroom furniture and collaborative technology use. Traditionally, higher education classroom furniture layouts were designed as having multiple desks in rows facing the instructor at the front of the room. This classroom furniture layout was adequate when learning was a broadcast of information in a “stand and deliver, sit and listen” format (Steelcase, 2016, p 2). Learning has changed from formal lectures to discussion, debate, and immersive styles of teaching which rely heavily on student to student and student to instructor facilitated learning that incorporates collaborative technology projects and assignments (Folkins, Friberg, & Cesarini, 2015). While teaching styles and pedagogical techniques have changed over time, most of the higher education classroom furniture layouts have not changed (Haghighi & Jusan, 2015; Park & Choi, 2014). Our research objective was to first, uncover student and teachers definition of collaborative technology and second, examine if they perceive the physical classroom space as influencing their collaborative technology use in the classroom space. To research this topic, online surveys were administered to 300 students and teachers at a Midwestern Land Grant
University to gather opinions of furniture and collaborative technology use. Two surveys, the Learning Environment Inventory for Student Assessment of Classrooms (Fraser, 1982) and the College and University Classroom Environment Inventory for Evaluating Higher Education Classrooms (Fraser, 2010) were adapted and used for this study. The survey included Likert Scales, open-ended questions, and rankings of classroom furniture floorplans with furniture arranged to promote collaboration. Data was analyzed using descriptive statistics and the constant comparative method to find themes in the data. We uncovered that there is a variety of definitions for collaborative technology use with most participants stating that an online class automatically fell under the category of collaborative technology. Results indicate that participants were mostly satisfied with their classroom size (72%), physical appearance (55%) and the furniture regardless of the traditional classroom furniture layout with rows of seating facing the front of the classroom. 28% of the participants feel their seating is comfortable with 17% unhappy with the size of their desk while only 6% of the participants think the furniture inhibits collaborative technology use. Most participants ranked a floorplan with round tables with chairs (Figure 1) as best for collaborative technology use with a close second of rectangular tables with chairs (Figure 2) in a radial pattern. While classroom furniture’s influence on student academic success is not new our results align with other scholars who argue for a change in the design of the classroom (Smith, 2004) to support collaborative technology use. The conflicting results of this study indicate that further investigations are needed between classroom furniture, collaborative technology use and student academic productivity. By documenting participants’ definition of collaborative technology use we uncovered that additional research into online classes and collaborative technology use is warranted.

REFERENCES

Biological Computation as a Means of Form-finding in the Design Process

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ABSTRACT

Context and Purpose of the Study
Architects have always looked to the natural world for inspiration, and today’s algorithmic technology opens exciting new horizons for incorporating biological growth patterns into the realm of design and fabrication. Recent work in this area has only begun to explore the possibilities of using biological systems either as a model for design algorithms (Duro-Royo et al., 2015) or as an actual component in fabrication processes (Araya, Zolotovsky, & Gidekel, 2012). Organic processes are an ideal model for sustainable design, as evolution has produced brilliant arrangements that often produce little or no waste while remaining strong, durable, adaptable, and flexible (Vincent, 2012). Our ability to model organic processes in design and construction is still in its infancy, as we have not yet even begun to approach the level of sophistication that is seen in the natural world (Oxman et al., 2012; Vincent, 2012). This research advanced our knowledge in the area of bio-mimetic design by analyzing the logic of bacterial cellular growth. By examining various patterns of bacterial growth, including their parametric logic, their use of responsive membranes and scaffolding structures, and their environmental fitness, this research creates new algorithmic design and construction models that can be applied through digital fabrication. This investigation stands at an interface between biological systems and architectural design, using computational techniques to simulate and model biological processes.
Method

The study is focused on two particular types of bacteria, Acetobacters xylinus and Synechococcus elongatus. These bacteria were selected for study based on the extent of the already-existing empirical knowledge about their growth patterns and the relevance of that knowledge to potential design applications. Early modeling investigations for both types of bacteria in this project include the analysis of image Z-stacks produced through confocal microscopy, as well as a review of relevant biological literature about cellulose structure and growth. Based on this data, simulations were created using programming language Processing to model the parametric environment and morphology of the bacteria’s growth. These models then were applied to design and fabrication processes. In more advanced modeling stages, the bacterial growth structures were reconstructed in 3D digital space, and physical models were designed and fabricated to illustrate the potential of this bacteria-based architectural logic.

Outcome and Relevance

This project studied the growth patterns of Acetobacters xylinus and Synechococcus elongatus as a potential basis for computer-mediated architectural assemblies. The resulting simulations can be used as a means to understand the structural morphogenesis of bacterial cellulose for the purpose of developing controlled-growth applications, and it can also be analyzed in itself as a model for human-created environmentally responsive structures. Three versions of the simulation were created, incorporating different parametric conditions based on observed bacterial behavior (Sano et al. 2010). The results from the study can inspire designers to make use of bacterial growth logic in their work, and provide them with practical tools for this purpose. The 3D models produced in the research provide concrete examples of how bacterial growth logic can be used in design, and can inspire new techniques of artificial material fabrication and assembly. The ultimate goal of abstracting biological growth patterns into code-driven models and tools is to gain new insights into how nature deals with physical dynamics, environmental parameters, and feedback within cell and tissue structures. The potential applications include novel designs for responsive surfaces, new fabrication processes, and unique spatial structures in future interior design work.

REFERENCES


Sano, M.B., Rojas, A.D., Gatenholm, P. and Davalos, R.V. (2010), Electromagnetically controlled biological assembly of aligned bacterial cellulose nanofibers, Annals of Biomedical Engineering, 38(8),

Students’ perceptions and use of history in design problem solving

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ABSTRACT

Relevance / Problem
In design education, history grounds many discussions through 'precedent' examples. The example of how a problem was solved in the past is used as a heuristic guide to approach a similar, new problem. Precedent examples form a professional canon that design students are asked to learn. Students entering design courses have little or no experience with these precedent examples and often struggle to position them into a framework of historical knowledge (e.g., theme, place, time) or to see the value of such historic examples to the pedagogy. Historical precedents can be valuable contexts for learning, but students may not be prepared to use such examples (and historical understanding) in how they think. How should design instruction help students develop historical understanding to use in the contemporary world? Is understanding history part of design learning?

Context
History’s role in defining society and our perception of the world has made how history is taught (and what is taught) fodder for passionate public debate (Harris, Burn & Wooley, 2014). Further, research concerning the understanding and use of history rarely focuses on how younger individuals, including teenagers, deal with history (see Hodge, 2011; Gorshkov & Sheregi, 2010). In application within design education, the issue of how history is used by current students as precedent or knowledge is increasingly problematic (Miljacki, 2011). The use of precedent and historical knowledge requires drawing on prior and tacit information in ways students sometimes
struggle to grasp (see Adams & Forin, 2016). Students’ perceptions about and willingness to use history shape precedents’ value in teaching and learning.

Method
A multi-year project was framed to explore how future design students understand, use, and react to history. Open-ended interviews and post-learning evaluations were conducted with 164 high-school seniors over a three-year period. The interviews asked students to define history, its use in their daily lives, and the sources they trusted. Students subsequently participated in a history-based learning activity designed to actively engage students with history through service learning or community interaction. Post-activity evaluations asked students to reflect on history and their learning. Consent and assent were recorded for each participant. Data also included instructor observation and student work products.

Outcomes
The data reveals a bias towards personalized history (e.g., told by family, revealed through experience) over formalized history (e.g., presented in books, culturally dominant). History-based learning activities did not significantly alter students’ perception of history or their desire to study it. The activities did foster reflection on personal experience, beliefs, values, and actions.

Advancement of design knowledge
Design students bring long-held perceptions of history to their post-secondary education. These ideas and biases can be reshaped through instruction, but also mold students’ openness to certain pedagogic techniques. The study suggests design students prior learning of history disinclines them to value precedent and design history as parts of a problem-solving process. Three strategies are proposed in response. Reshaping precedent as personal experience or first-person narrative may engage some students to consider its value. Linking contemporary projects to the recent past through oral histories or service engagements may build self-initiated consideration of precedent. And, demonstrating precedent’s use in solving current design problems may show students how to build their knowledge. If design education understands students’ perception of historical knowledge, instruction can connect relevant learning opportunities into strong design process.
REFERENCES


Universal design in interior design education: National survey results

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ABSTRACT

ABSTRACT: The World Health Organization estimates that over one billion people, or 15% of the world’s population, have some form of disability. As demographics change and the world’s population continues to age, this number is expected to dramatically increase. In response to this global trend, many designers, advocates, and anyone interested in making physical and visual environments more usable for people of varied levels of ability have adopted the philosophy known as universal design, inclusive design, or design for all. While some design disciplines have not embraced this concept, interior design educators have lead the charge to incorporate universal design theory and practice universal design practice into their curricula. Researchers affiliated with the Center for Inclusive Design and Environmental Access (IDeA Center) at the University at Buffalo—State University of New York conducted an online survey to assess the state of universal design education in interior design curricula. The research team distributed the survey to interior design educators and administrators in all institutions with accredited degree programs in the U.S. The study, sponsored by the National Endowment for the Arts (NEA), consisted of both qualitative and quantitative questions that sought information related to the understanding, attitudes, and incorporation of universal design into the curriculum of each participant’s program. Analyses of the survey findings not only will show direct responses to survey questions, but also relationships between the questions. Qualitative and quantitative results will show variability.
across schools, in terms of how, when (course level), and the degree to which universal design aspects are incorporated into curricula. Implications for interior design education and practice, as well as future research, will be discussed.


REFERENCES

Center for Inclusive Design and Environmental Access
No codes, no problem: Residential design as a framework for user-centered design

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ABSTRACT

A common connotation associated with residential design is that it is somehow less than the design of commercial spaces. Its practice is not driven by a myriad of codes to protect the health, safety, and welfare of occupants in residential spaces and licensure is not required to practice in many states. Further, the prolific HGTV culture has marginalized the professional practice of residential design. According to Interior Design Magazine, residential design only makes up about 5% of the market sector for the top 100 design giants, bringing in $184M in fees in 2017 (Zimmerman, 2017). While these facts may seem a logical rationale for limiting residential design education to a comparable percentage, that would be a premature dismissal of a rich breeding ground for studying empathy, user-centered design, and the human experience in spaces. This presentation asserts that as trends indicate people want shared spaces that embody the values we have historically ascribed to the home, a closer examination of residential design reveals its potential as a framework for user-centered design in all spaces. Literature has shown that design trends in non-residential applications have become increasingly focused on a user-centered design approach, taking into account the well-being and satisfaction of occupants (Brunia, De Been, & van der Voordt, 2016; Shipley & Danko, 2017). Commercial projects are expected to see continued focus on the user experience in the coming years (“Top 100”, 2017). The 2017 CIDA Summit Report supports the inclusion of empathy-generating educational experiences as a means for deeper learning, and accreditation standards support this emphasis in several standards (CIDA, 2017). The expanded focus on social justice, empathy, and the needs of humanity is
evident across the entire discipline of interior design, and it can all be explored through the study of residential spaces at their inception. In a world focused on the deeper influences of space on business culture and occupant outlook, it follows that one would look back at the origins of the study of people in their most intimate spaces, their homes, as a model for such transformative design. Homes reflect our personal selves, making powerful statements about who we are and how we operate (Marcus, 1995). Marcus challenges occupants to engage the soul with their place of inhabitance; all in ways which can be paralleled in commercial spaces. Her close examination of engagement with residential spaces suggests soul nurturance, engaging in a dialog with the environment, and active listening for establishing a connection to space. This presentation offers a framework for applying Marcus’ theories on engaging with one’s home space as a basis for understanding the trends toward user-centered design in a variety of non-residential environments. By reimagining residential spaces as the impetus of user-centered design, perhaps residential design can overcome its less than connotation and once again be regarded as equal to commercial design. This presentation posits that residential design’s historical basis in user theory is a valuable tool for examining spaces that are not residential, yet demand qualities that make residential spaces personal.

REFERENCES


one method fits all? : individual differences in cognitive styles and creative performance in the design process

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ABSTRACT

Interior design involves the process of solving various problems by conceiving ideas and creating spaces and spatial elements. Creativity is highly valued in the design process and is also considered as one of the most significant skills required for the 21st century (Trilling & Fadel, 2009). Stein (1953) emphasizes the importance of “creative experience” or “the creative process” that designers go through before they arrive at a concrete creative design idea. Artifacts produced during the design process are not necessarily evaluated whether they are creative or not, but the creative design process itself helps designers generate creative design solutions after all (Gero, 1994). More specifically, many researchers argue that the process involving a combination of thoughts, ideas, or elements is often related to creative ideation (Baughman & Mumford, 1995; Boden, 1998; Estes & Ward, 2002). However, experienced educators also recognize the existence of individual differences in students’ tendency, preference, and style of ideation during the design process. How would individuals with different cognitive styles perform through the combinational ideation process? Messick (1976) defines cognitive style as “consistent individual differences in preferred ways of organizing and processing information and experience” (p. 5). A number of research shows that such individual differences exist in creative design: for instance, intuitive individuals are more capable of generating highly original ideas (Garfield, Taylor, Dennis, and Satzinger, 2001). The goal of this research is to understand how the structured
ideation process affects the creative experience of students with different cognitive styles, focusing primarily on the combinational process of ideation. This study examines the domain-specific relationship between cognitive styles and improvement of creative performance within the structured combinational ideation process. Fifty interior design students enrolled in the second year of an interior design program at a Midwestern university participated in this study. The design process was structured into initial design (ID) – variation (VP) – combination (CP) – final design (FD). The participants were asked to create a light screening device that consisted of three dimensional patterns using abandoned scrap materials such as pop tabs and ice cream sticks. They were asked to sketch an initial idea first; they were then instructed to create various pattern ideas and combine these ideas to create something new; after the exercise, the participants were asked to draw a final idea. The participants’ creative performance was measured at the initial (ID) and the final design (FD) phase. To identify students’ information processing styles, the Cognitive Style Index (CSI) developed by Allison Hayes (1996) was used. The participants were divided into three groups based on their cognitive styles: intuitive, adaptive, and analytical. To measure creative performance, Amabile’s (1982, 1996) Consensual Assessment Technique (CAT) was used, and three interior design instructors evaluated students’ projects. Findings indicated that intuitive individuals generally showed the highest creativity at the initial design phase, but individuals possessing an adaptive information processing style showed the highest increase in the final design after completing the structured combinational ideation process. Interestingly, the result shows that intuitive individuals generally showed a decrease of creativity in the final design, implying that a certain structured method might not help a certain group of students with different cognitive styles. Although this study is limited in that it only used the combinational ideation method, the result of this research will provide design educators with meaningful insight into the instructional methods based on students’ information processing styles, especially in helping students struggling in the ideation process.

REFERENCES


Multidisciplinary: Design, Architecture, and Pedagogy | Scholarship of Design Research | Presentation

Improving learner outcomes in design and architecture through intentional online teaching strategies

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ABSTRACT

Online education has seen exponential growth in recent years. (Allen & Seaman, 2013). However, design education carries special challenges in an online environment. Design is inherently collaborative; therefore it is at odds with the primarily asynchronous approach to online learning. Professors cannot rely on the teaching methodology typically used in brick and mortar classrooms. Although many institutions attempt to support online educators by providing learning models, they often do not provide realistic ways for educators to create meaningful learning opportunities that support learner needs. In advanced design theory and philosophy courses, complicated readings are the primary sources of information, but can be burdensome for learners and often lead to learner disconnect. Can we expect learners to simply read the work of Bertrand Russell and understand the philosophical implications of appearance and reality? Or compare the ideas posed by Plato and Aristotle for a deeper understanding of Formalism versus Functionalism? (Bucsescu and Eng, 2009) Can we expect learners to relate design theory with cultural, political, socioeconomic, and historic contexts to form their own opinions without proper guidance? Research problem Creating an engaging online environment for design theory courses is challenging. It involves two aspects. First, online learners have a hard time connecting with abstract ideas due to the typically asynchronous approach to online learning. This is exaggerated by both content that is complex, and learning experience (i.e., design as a collaborative endeavor). Second, professors do not have the training or support to really help students engage with complex ideas in an online environment. Research Aim This study outlines the content and
intentional organization of an online design/architecture philosophy course using the principles of adult cognition and intrinsic motivation as its strategies. The aim is to determine whether specific strategies can help online learners create deeper abstract meaning and knowledge transfer while providing educators with a realistic approach to engage learners with complex ideas in a way that is personally relevant and meaningful. Methodology This study analyzes the content and organization of a senior level online course in design and architectural theory using adult motivational theory and culturally responsible teaching. Using a review of literature on adult cognition (e.g., Piagetian, Social Constructivism, and Skill theory) and motivation, the study relates learning activities and student engagement with content at a deeper level. To examine students’ perceptions of the effectiveness of this course, a survey was conducted as part of the research study. Participants were students who took the course online as one of the mandatory courses within their interior design degree program. Survey questions aimed to evaluate students’ comprehensive learning experience through investigating their opinion regarding several aspects such as: course organization, content, activities, engagement, and course impact on students’ thinking of design and the built environment. An assessment of student work in assignments in relationship to specific motivational strategies was also performed. Analysis of outcomes Based on survey analysis, most participants stated that the course was “Mind Opening”, “Useful”, “Enjoyable”, and “Inspiring”. Further, assessment of student work indicates that student engagement was meaningful, personally relevant, and indicative of higher order thought processes (abstract thought). While this is only a pilot study of the use of motivational theory in online design courses, indications are promising that the intentional strategies based on adult learning and cognition have a direct impact on student outcomes and knowledge transfer as they prepare for professional practice as thinking designers.

REFERENCES


Finders or makers? Lessons offered across the disciplines on developing creative confidence

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ABSTRACT

Creative people typically work in two ways: either as finders through analysis or as makers through synthesis (Owen, 2007). Given that both ways of thinking can be developed through educational experiences that call on observing, generating ideas, making and prototyping to find, explore and solve problems (Razzouk & Shute, 2012), are we aware of and do we explicitly apply this research of creativity to advance pedagogy in our field? To explore the importance of creativity within interior design education, this study aimed to identify first-year student perceptions of creativity that were being addressed through a paired set of creativity courses. The study involved two interdisciplinary creativity courses offered for minor on innovation at public research university in two consecutive years. The first course introduced the theoretical groundwork of creativity with experiential learning opportunities. The companion course focused on the application of creative problem-solving strategies to an innovative team project. The course content and structure for two years stayed similar but the first course in year 2 expanded to include a 3-dimensional prototyping experience. The authors will share insights from the following questions: 1) To what extent, if any, have students changed perception of creativity as a function of course learning; 2) What dimensions of creativity appear more stable or amenable to change; and 3) What implications does this research raise for interior design education? As a pre-post methodology, the students who took the set of creativity courses completed the questionnaire three times: at the beginning and the end of the spring semesters (the first course) and in the final
week of the summer terms (the second course). The survey contained the Kaufman Domains of Creativity Scale (K-DOCS) (Kaufman, 2012) to measure areas of creative confidence by 50 items within five domains (i.e., Self/Everyday, Scholarly, Performance, Mechanical/Scientific, and Artistic creativity) and three items to measure the creative personal identity (i.e., how strongly do I identify myself as a creative person). In addition, student written reflections were also collected and analyzed. The sample for this study involved 186 students representing over thirty majors from two different cohorts. The participants were 75 first-year students (57.3% male) in year 1; and 111 first-year students (51.4% female) in year 2. The results of a series of one-way repeated ANOVA indicated that creative personal identity become gradually stronger throughout two creativity courses with a statistically significant growth appeared in two items in year 1 and one item in year 2. While the level of creative confidence in most domains were higher at the end of the second course than the beginning, but they did not show a statistically significant difference except for Scholarly creativity in year 1. Notably in year 2, the Mechanical/Science creativity showed remarkable growth in its level at the end of the first course that included a 3-dimensional prototyping experience. (Appendix) The study found support for investing in explicit creative “training” focused on thinking and making, as appeared to stronger mindset of creativity in diverse domains. For nurturing young adults who across the boundaries of discovery and making, the design thinking approach can channel creativity scholarship and awareness into real-world application. More importantly, explicitly incorporating creativity-learning experiences into the interior design curriculum is worth investing in to optimize student development. And that both “thinking” and “making” experiences offer an iterative process to build creative confidence that, when combined with original thinking and value-added skills, can elevate not only the individual student but offers as means to connect with greater confidence when working with clients or collaborating with allied professionals in the field.

REFERENCES

Design-related Television Shows and First-Year Interior Design Students' Understanding of the Profession and Built Environment

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ABSTRACT

Interior Design educators have long expressed concern that design-related television shows present a distorted view of the profession to prospective students (Waxman & Clemons, 2007; Shyu, 2010). These concerns are predicated upon the abundance of celebrity authoritarian voices, and the dissemination of myths pertaining to the design process and profession (Martin, 2004; Dodd, 2016). This authority extends beyond homeowners seeking to craft a message of personal taste, to influence those pursuing career aspirations in interior design (Waxman & Clemons, 2007). In 2016 the authors—faculty at a CIDA accredited interior design program—witnessed the largest single-year enrollment increase in the design program’s history. The growth coincided with the rise of a popular Home & Garden Television (HGTV) design reality show positioned in the same city. While the number of incoming students enrolling in the university as a whole increased by a modest 3.2% from 2015 to 2016, the incoming interior design class grew 100% year-to-year (from 18 students to 36, respectively). No new recruitment measures had been introduced. Anecdotal reports from incoming students, however, indicated the local HGTV show was a factor for many students in their decision. With such extraordinary growth the authors proposed the following research questions: What were the primary motivators of incoming students to choose interior design as a major? and, Did students who indicated that design-related television shows were their primary motivation for studying interior design, perform as well as their peers in the amount of accurate background knowledge pertaining to the profession? The
aims of this study were to examine the influence of design-related television on the decision of incoming first-year students to choose Interior Design as a major, and to assess how it affects students’ understanding of the profession and the built environment. The authors asked students enrolled in an Introduction to Interior Design Course to complete a 25-question survey, administered through Qualtrics and analyzed using SPSS. A total of 54 first-year interior design students (33 in 2016 and 21 in 2017) participated in the study, which was conducted during the first week of the Fall semester prior to any course content being introduced. Students under the age of 18 or who were not interior design majors were excluded. The questionnaire included ranking, multiple-choice, and open-ended questions (see appendix). Open-ended questions were divided into definition and image response, the latter measuring students’ ability to describe the visual character of interior environments. The findings show there was no statistically significant difference between the performance of students who selected “design-related television” as their primary motivation for studying interior design and students who selected another motivation. Additionally, as a group, students who pursued interior design primarily because of television had the highest average score on image description questions (mean=1.889) when compared to other motivations (family/friend in the industry=1.583, dream since childhood=1.300, no architecture degree option=1.000, other=1.375). Open-ended questions were scored based on the following criteria: 1=Lack of understanding, 2=Some understanding, 3=Accurate understanding. While additional surveying is necessary to evaluate broader implications of design-related television, our initial findings suggest students who are motivated to study interior design because of it, perform similarly to their peers on measures of basic design knowledge. HGTV’s influence shows no sign of waning and educators should be wary of ignoring its role in popular culture. As such, consider Samuel Dodd’s suggestion to look to HGTV as a model for outreach: “time spent policing traditional cultural binaries would be better spent learning how popular media work to spread ideas in society” (2016).

REFERENCES
Want to Engage Millennials: Try Preservation

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ABSTRACT

Background
A new survey for the National Trust for Historic Preservation, reveals that 97% of the nation’s largest generation, millennials, appreciate the value of historic preservation (Historic Trust, 2017). Enter a new lecture course, Introduction to Historic Preservation, which was offered to interior design millennial students. Shortly after the concept for the course, members from a church located in a small rural town approached the Interior Design Program about assisting them in protecting their church building. With many rural areas facing shrinking populations, shrinking church congregations, and shrinking congregational financial support, many church structures are at risk. The opportunity for a service-learning experience for the new course was proposed. Many in academia view service-learning as a connector of academic study to the community and it is also widely recognized as creating student learning that is deeper, longer lasting, and more open-minded to new situations and circumstances (Ehrlich, 2007; Zollinger et al, 2009).

Method
Implementing the service-learning framework for interior design education as outlined by Zolleringer, Guerin, Hadjiyanni, and Martin in 2009, the project was developed using their criteria (see appendix) (Zollinger et al, 2009). It was determined that the most effective assistance would be to register the structure with the National Register of Historic Places in order to acknowledge the architectural significance of the building. Although this will not protect the building, it would bring local attention to the structure through national recognition. The project
began by exposing students to the physical structure of the building, including the history of its lifespan that was provided by church members. The State Department of Archives and History provided examples of previously completed applications as a guideline. A representative from the State Department of Archives and History lectured on the preservation movement in the state. As a group, the students visited the actual structure, took copious notes and photographs of the exterior and interior details, and developed a personal connection to the church. Data was compiled by the students and information was shared with the entire class. The twenty-two (22) students were divided into two groups. During and outside of class, students developed interior and exterior narratives as outlined by the National Register of Historic Places Registration Form. Students noted the changes that had been made since its construction, creating a timeline of modifications to the church. This aided in the effective descriptions that had occurred in the history of the church and was included in the form narrative. The students understood that this was one segment of the nominating procedure. This is an ongoing process to be continued in the Fall 2018 preservation class. The next segment will be creating a representational floor plan and extensive site plan using digital drawing.

Analysis
Through working with an actual structure and becoming familiar with the documenting process needed to nominate a structure for the National Register, the students developed a working knowledge and understanding of preservation by using the tools and techniques taught in the class. Students responded favorably to the service-learning project and continue to be engaged with the church structure and the outcome of its on-going progress toward nomination.

REFERENCES

National Trust for Historic Preservation. (2017). Reclaiming the past in bricks and mortar: New study reveals millennials’ desire to connect with historic places [Survey data Edge Research]. Ret
Human Centered Design Education in Interior Design:  
A Global Perspective of Design Firms

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ABSTRACT

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). Human centered design is not a design style, but a design process which is ground in the information about the users of the space. Human centered design should utilize all data on cognitive abilities, physical abilities and limitations, social needs, and task requirements as it relates to the user of the space to develop a living environmental solution, enabling all users to function at their highest capacity (Greenhouse 2012). In this regard, the goal of this study is to compare industry expectations about essential human centered design knowledge with students’ perceptions of requisite knowledge about human centered design to work efficiently around the globe. Online survey was conducted among the design firms and students enrolled in Interior Design programs across several Universities in US. The overall research process of the study
involved selecting participants; developing the survey instruments; performing cognitive interviews for instrument validation; distributing the online survey questionnaire to selected samples; and analyzing the collected data. The presentation will provide information about the differences in the students versus industry responses, and how the perceptions vary across different regions of US.

REFERENCES

“Real Work”: Approaches to addressing work experience in undergraduate curriculum

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ABSTRACT

Learning through work coincides with learning about work. Work experiences such as internships and cooperatives create a connection to the profession that affords essential industry knowledge through the application of education in a “real world” setting. Such purposeful professional experience can be mutually beneficial to the students, the academic programs in which they are enrolled, and the firms who employ them (Fishburne, 2015; Maertz, Stoebler, & Marks, 2014). While students benefit from exposure to “real” projects, academic programs benefit from use toward accreditation standards and enhanced reputation (Black, 2000). Research has shown that work experience prior to graduation is very important in job placement (DesignIntelligence, 2016), which is beneficial to students and academic programs. The Council for Interior Design Accreditation (CIDA) emphasizes the need for work experience by allowing it to be counted as a source for evidencing standards compliance within 13 standards (CIDA, 2016). It is clear that work experience prior to graduation is an important aspect of education but also to the discipline. However, what is missing from research is a current look at the internship experience from a faculty viewpoint. Therefore, this study was undertaken to determine a comprehensive understanding of the approach programs use to address work experiences. The objectives of this research are to investigate student work experience requirements in CIDA accredited undergraduate programs and explore faculty’s perceptions of the requirements. A review of curriculum requirements for 175 CIDA accredited undergraduate programs in North America was conducted through a 15-item online questionnaire. Open and closed-ended questions were
included to determine requirements, placement assistance provided, application of CIDA standards, and faculty views. The survey was sent to the program coordinator or faculty responsible for internships and had a 43% response rate. Researchers compiled curriculum requirements from program websites for unresponsive programs. Descriptive statistics were used to summarize data while content analysis was used to determine themes of faculty views. The research findings indicate work experience within an academic framework is integral to most programs as 94% offer a work experience course (elective or required) within the curriculum. However, the title given to the course and course requirements varied in credit hours, timing within the curriculum, deliverables, and working hours. The majority of programs (70%) require students to achieve work experience prior to graduation. Furthermore, it is clear that work experience is integral to achieving CIDA accreditation, as 77% of responding programs that require work experience use the deliverables toward accreditation. Themes emerged showing placement including quality, consistency, and paid positions was the biggest challenge, while students achieving “real work” experience was the biggest strength. This presentation will present themes and trends which emerged from participant responses, and will offer anecdotal evidence to support the data. Information will be broken down by region for comparison and analysis. The organization and sharing of this research is intended to help educators add to their understanding of the importance and variety of work experiences in design education. Through discussion and discourse, this presentation offers participants an opportunity to compare program offerings and address potential pitfalls, as expressed through data analysis.

**REFERENCES**


Get to work: Evaluating student internship experiences

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ABSTRACT

An internship acts as a practice-based student learning experience and serves as an ideal benchmark for educators to determine how the academic program is preparing students. Internships can enhance student learning while also helping students feel more prepared for practice (Tarver, 2013). Yet, few studies in interior design have examined student work experiences in the last 15 years. Those that have been conducted have focused on practitioners’ perspectives (Fishburne, 2015; Gale, Duffey, Park-Gates, & Peek, 2017). The lack of academic studies on student perspectives is surprising as internships are a key component to career preparedness. Therefore, this study aims to begin to address this gap in literature by using grounded theory to investigate internship experiences from the interior design student’s viewpoint. Specifically, seeking to determine experiences students found valuable and exploring students’ expectations of the internship experience. Interior design has a clear career cycle requiring education and experience before becoming eligible for examination and professional licensure. Although work experience is not required by the Council for Interior Design Accreditation (CIDA), there are 13 standards in which internships can be utilized toward accreditation (CIDA, 2016). Additionally, the Council for Interior Design Qualifications (CIDQ) allows up to half of the required 3,520 hours of practice-based education required for eligibility for the NCIDQ examination to come from an internship after 96 academic credits have been completed (CIDQ, 2016). In educational settings, there is a need to better understand what practice-based learning experiences student interns are acquiring to help better prepare students for their career. This exploratory study used a convenience sample of 191 students at a CIDA accredited Southeastern university over an eight-year period. The self-reported 13-item
questionnaire contained open and closed-ended questions addressing use of software, personal interactions, and student experiences during a required 400-hour internship under a licensed architect or NCIQD certificate-holder. Descriptive statistics and thematic coding were used for data analysis in the qualitative approach. Key findings revealed that most interns gained experience in material (96.3%) and furniture (84%) specifications and space planning (83%). The majority of students had the opportunity to experience site visits (86%) and interact with clients (82%), sales representatives (96%) and architects (72.8%). Themes emerged showing students highly valued these personal interactions, site/showroom visits, and working on “real” projects. Interaction with clients and product representatives were the most valued experiences as one can anticipate students enhanced their understanding of the business and expanded their network. In addition, students were found to have inconsistent expectations between their role as an intern and their responsibilities, office environment, and the industry norms during an internship experience. A full report of the themes will be presented including lessons learned. While this is a case study of one program it offers longitudinal insight into students’ perspectives, thereby increasing the study’s validity and reliability. The findings reveal common sentiments among students regarding their internship experiences while also providing insight to educators and employers on what students’ valued during their internship. These perspectives will allow educators to evaluate the fit of internship experiences within their programs as well as mitigate any misconceptions students may express upon their return to the classroom. Overall, this work further emphasizes the importance of programs using internships as an assessment tool within the curriculum.

REFERENCES


Pinterest as a collaborative tool: Negotiating participation in the design process

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ABSTRACT

The role of technology in collaborative design process has been studied through communication technologies (Dudek, Kim & Paik, 2017) and software for creative production such as BIM (Miller, 2017). Less explored is the increasing role of social media technologies in reconfiguring work practices of designers. As interior designers continue to adopt social media technologies such as Pinterest as a part of the design process (Scolere & Humphreys, 2016), it is important to understand the ways in which interior designers are using Pinterest as a collaborative tool for designing interior environments. Unlike many other design production technologies used in the design process, Pinterest as a social media technology is a familiar tool used frequently by everyday users. Building on participatory design processes (Björgvinsson, Ehn & Hillgren, 2012), this study seeks to understand the role of social media technologies such as Pinterest in design collaboration not only between designers but also between designers and other project stakeholders. Method To investigate how Pinterest is being adopted by interior design professionals as a collaborative tool, this project draws on two sources: 1) in-depth interviews with professional designers about their design process practices and 2) a case study of a multi-stakeholder team using Pinterest as a part of an interior renovation project. In-depth qualitative interviews were conducted with 15 professional designers who were recruited through professional interior design networks along with 6 members of a multi-stakeholder team. Findings: Overall, the interviews with interior design professionals highlight how Pinterest has become a key collaborative tool for designers as a part of the design process because it affords multiple designers a continual visual awareness of other design collaborators’ activities through
shared online group board. This allows multiple team members to asynchronously collaborate on the design direction in the early stages of a project. Other motivations for using Pinterest group boards between designers on a team included efficiency, a continual visual dialogue for asynchronous inspiration-gathering, and digital resource-building for future projects. Moreover, the interviews and case study reveal that there is a continuum of stakeholder participation for how designers and clients are using Pinterest to collaborate on interior design projects. This continuum ranges from high client involvement with clients initiating Pinterest boards to a mid-range of involvement with designers creating Pinterest board templates for client participation to a low involvement where clients only view the boards. This continuum offers insights for negotiating new aspects of participation in the design process. The case study findings highlight how clients viewed their pinning of ideas to group boards as an effective way to communicate their point of view with the design team and added to their sense of ownership of the design process.

Implications: Overall, this study finds that Pinterest acted as a “boundary-negotiating” object (Lee, 2007) between diverse stakeholders to develop a common project language for negotiating the design process. Moreover, using Pinterest as a collaborative tool has implications for disrupting traditional roles of participation in visioning session practices and schematic design. As Pinterest moves from a tool being used behind the scenes by designers to a tool for engaging and communicating with clients as a part of the design process, tensions emerge around the publicness and informal nature of communication through social media, the timing and types of participation by the client in the design process, and the complexities of participation based on the role of the stakeholder. As such, this research has implications for using Pinterest in design studio education and developing literacies around social media technologies for design collaboration.

REFERENCES

Miller, L. (2017). BIM, visualization, and VR, oh my! Aligning professional technologies with academic rigor by implementing BIM and virtual reality into a lower level design and construction technolo
Well-designed for Social Well-being: A WELL Certified Office Pre-Post Case study

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ABSTRACT

In a competitive knowledge work economy, the key engine that keeps organizations growing and innovating is their people. Along with this recognition, organizations are increasingly seeing the importance of the physical environment in driving human performance. As an advocate for demonstrating the impact of design, the American Society of Interior Designers (ASID) put research and design into practice when designing their new corporate headquarters. Before moving in spring 2016, ASID was previously in a co-working location renting a suite of shared offices each occupied by 2-6 people and took this as an opportunity for pre-/post-occupancy research. The new office is designed with flexibility and has a variety of workspaces to choose from, eliminating hierarchy. In addition, the new office received platinum level certification for the WELL Building Standard (WELL), a system for measuring and certifying building features related to air, water, nourishment, light, fitness, comfort and mind to address issues that impact the health, comfort or knowledge of occupants through design, operations and behavior (Delos, n.d.). This pre-post case study examines how workplace design has affected ASID employees’ satisfaction, experience, and performance to further explore this relationship. This study developed a research framework (Figure 1) to understand employees’ environmental satisfaction, workplace experiences and perceived performance outcomes of the two office environments. Indoor environmental quality factors were measured with satisfaction ratings on air quality, lighting (natural and artificial), noise, speech/visual privacy, ease of interaction,
furnishing/furniture comfort, color/texture, available space, and cleanliness. Workplace experiences were considered as perceptions of the work environment and social/behavioral interactions within the space, and were measured by place attachment, perceived support, perceived stress, and behavioral interactions. Workplace outcomes were measured with perceived creativity, productivity, job satisfaction and turnover intention to examine employees’ perceptions of how well the organization is doing and individual employees are doing with their jobs that are directly linked to organizational performance and costs. Data was collected 6 months before and 6 months after moving to the new office using anonymous self-reports and wearable social interaction sensing devices (Lepri et al, 2012) and follow-up interviews were conducted to support findings. The pre-/post case study had 30 employee participants, in which independent sample t-tests (N=53) and paired t-tests (n=13; employees participating in both phases) were performed to compare environmental quality satisfaction, workplace experiences, and outcomes between the old and the new offices. A series of linear mixed models were used to evaluate the effects of environmental factors and workplace experience measures on workplace outcome measures after controlling for the random effects of repeating subjects. Key findings include significantly higher satisfaction across all environmental quality measures especially in lighting, noise, and speech privacy in the new office. Place attachment was significantly higher in the new office attributing to employee’s higher satisfaction in ease of interaction. Perceived support was also significantly higher in the new office attributing to higher ratings in visual, speech privacy and ease of interaction. Significant effects of place attachment and perceived social support on job satisfaction were found, despite having no significant difference in job satisfaction between the two phases. Significant differences were found for organizational productivity (higher in the new office) and turnover intention (lower in the new office). These results suggest a well-designed workplace that positively influences social well-being can lead to better outcomes.

REFERENCES


Experiences of Designing Women: a Portrait of Female Interior Designer’s Job Satisfaction Across Career-Spans

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ABSTRACT

There have been many studies examining job satisfaction and dissatisfaction in professions other than interior design, including related areas such as architecture and project management (e.g., Bowen, Edwards, Lingard, & Cattel, 2014; de Graft-Johnson, Manley, & Greed, 2005). To this point there is only recent foundational empirical research focused specifically on interior designers’ job satisfaction (e.g., Hill, Hegde, & Matthews, 2014). Each of these studies used a quantitative or mixed method approach, showing a need for further qualitative explanations to understand why interior designers perceive their jobs and careers in a specific light. Uncovering the state of job satisfaction or job dissatisfaction within the interior design profession is key to understanding how to improve the workplace for this demographic. Interior design is a sector of the job market that is relatively new and continually growing. Research shows that interior designers face unique circumstances in that they are a female dominated profession (IIDA, 2017) working within a male dominated industry (Bureau of Labor Statistics, 2016). Interior designers also face specific challenges that come with being a creative in a relatively young and evolving profession (e.g., Hill et al., 2014). The purpose of this study is to compose a portrait of different female interior design professionals currently employed and recently departed from the
workplace. Participants represented diverse phases of life and career. This portrait is aimed at exploring what factors impact female interior designer’s perceived job satisfaction or dissatisfaction, why these factors arise, and how they affect designers at different stages of their lives and careers. Twelve practicing interior designers from three career phases (i.e., early career, mid career, late career) were interviewed to gain a holistic and diverse perspective of job satisfaction among interior designers. At the beginning of the interview, participants were first asked to draw an image that reflected their jobs. This form of image elicitation gave participants the opportunity to reflect inwardly as they were drawing and gave them the chance to express themselves in an alternate, unconventional form. After the drawings were complete participants were interviewed using the drawings as a starting point and continuing to questions guided by a conceptual framework that is based on factors of job satisfaction found in empirical research.

This study creates a portrait of the lived experiences of women in the interior design field as they progress through life. While findings are limited to individual experiences and perspectives, together they compose a narrative that is relatable for designers and professionals of all types. This narrative describes how individuals navigate through their career in reflection of their own life circumstances. Stories shared are beneficial for three key groups: 1) those contemplating becoming interior designers, 2) current interior designs, and 3) those who employ interior designers. For those contemplating becoming interior designers it discloses the state of job satisfaction for current interior design professionals, aiding in accessing the correct fit for their personalities and traits and giving them insight into what interior designers experience. For current interior designers, it identifies issues or successes that other designers are currently facing. For those who employ interior designers it gives insight into what interior designers find positive and negative in their work environment. This can result in improvements in the workplace, in turn, improving retention of interior design staff.

REFERENCES


A Collaborative Approach to Promote Child Health and Education through the Built Environment

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ABSTRACT

Introduction
This study aims to address the importance of the built environment as a health intervention in preventing childhood obesity. A number of studies have addressed the importance of the built environment in childhood learning and behavior. (Shabha, 2006; Gaines, Bergan, and Curry, 2014. However, interior and environmental design professionals have the ability to do much more by providing a health intervention to promote health and wellness. Approximately 30% of children in the US are overweight or obese (Cosco, N. G., Moore, R. C., & Smith, W. R., 2014). This project is based on research that shows that an outdoor learning environment (OLE) 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). This project is a collaborative effort between design professionals, the Centers for Disease Control and Prevention, and state agencies. Interior designers and landscape architects worked together to develop the relationship and the transition between interior and exterior spaces. The goal of the project is to increase childhood physical activity, increase age-appropriate motor skills, and reduce risk of injury by improving childcare center outdoor environments. This project is an evidence-based childcare center design intervention that will provide resources to establish technical assistance and local resource centers.

Methods for each site:
1. Pre-intervention: site visit, focus groups, and interviews of administrators, teachers and staff. 2. 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 OLE. 3. A cost analysis was created and the design team worked with each center to prioritize and develop a plan for implementation. 4. Implementation

Findings/Relevance to Interior Design
Research has established a series of twelve key indicators including multiple activity centers that encourage movement and a less sedentary environment; fruit and vegetable production to promote heather eating habits, and natural elements that stimulates a child’s curiosity. The collaborative design team worked together to implement the project at four sites in the Southwestern US. This project addresses the Obesity Prevention performance measure by increasing physical activity in childcare environments (targeting children with BMI in the overweight/obese range). It also increases age-appropriate motor skill development so that a child can master fundamental movement skills and develop specialized movements in childhood and adolescent age (prompts reduction in the percentage of children and adolescents with BMI in the overweight/obese range). Furthermore, this project supports Child Injury performance measure efforts’ as it educates children, parents and caregivers on practices that reduce risk to injury in environments. If selected, this presentation will explain and illustrate the best practice indicators for developing interior and exterior learning environments that promote health and wellbeing. Practical recommendations for designers will be discussed in detail.

REFERENCES
Speech Intelligibility for a Speech-Language Therapy Clinic

Michelle Pearson, Texas Tech University
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ABSTRACT

Introduction The acoustical properties of therapeutic environments are important for all users. As stated by Joseph and Ulrich, “unwanted sounds can be detrimental to the patient and staff health” (2007, p. 2). These unwanted sounds have been linked to a number of negative psychological, physiological and cognitive outcomes. One healthcare facility where the acoustical quality is particularly important is a speech-language-hearing clinic, where individuals with hearing, processing, speaking, and cognitive disorders go to seek treatment. In facilities such as these, speech-intelligibility is especially important to the treatment process. Speech-intelligibility is the communication and comprehension of what is being said between a speech-language therapist (SLP) and the patient. When speech intelligibility is diminished, speech, hearing, and cognitive processes are negatively affected. Therefore, there is a need to control unwanted sounds to aid in speech intelligibility and speech privacy through the use of acoustical design.

Objective
The purpose of this research was to review different acoustical designs and methods that can be used to create an ideal acoustical climate for children and adults with different speech, language, communication or swallowing disorders. Application methods and acoustical treatments for a variety of interior surfaces were evaluated to help control for unwanted sounds coming into a space. The research questions aimed to identify the different acoustical features that would improve a speech-language clinic. Finally, a series of design guidelines, based on feasibility, were developed for future projects.

Method

An extensive literature review was conducted to gain an understanding acoustical qualities of speech language therapy clinics and how design features may impact speech intelligibility. Because there were limited articles related specifically to the design of a speech-language clinic or therapy room in terms of acoustics, a number of articles relating to educational and healthcare acoustics and designing for people with autism, cognitive or physical impairments, and designing for elderly were utilized. Next, an existing speech language clinic was selected for the project. Through a site analysis, it was determined that the existing facility had a number of acoustical issues, including the transmission of sound into the therapy rooms. Based on the findings of the literature review, the existing site was redesigned to control for outside noise transmitted into the therapy space, transmission of sounds from within the clinic space, and prevent reverberation while enhancing speech intelligibility within the room. Finally, three different sets of design guidelines were developed that could be applied to future design projects.

Results and Implications

The findings in the research indicated that the design features which promote speech intelligibility can be accomplished by making changes to following surfaces: walls, floors, ceilings, doors, and windows. The study found that applications and changes to the construction
of the interior envelope (walls, floor, and ceiling) will help prevent unwanted sounds and background noise while increasing the speech intelligibility. By allowing these changes to be made to a speech-language hearing clinic, speech intelligibility within each room would be increased, as well as the speech privacy of each therapy treatment room. The design recommendations can be applied to a number of other healthcare environments as well as to classrooms and educational environments.

REFERENCES


Trends in tunable white lighting and office interiors

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ABSTRACT

Background:
The National Human Activity Pattern Survey (NHAPS) estimates that Americans spend about 87% of their time indoors. With such a large amount of our lifetime spent inside buildings, it is no surprise that Human Centered Design (HCD), health and wellness have become important factors in interior design, especially in office design. Technological advances in heating and cooling in the mid-20th century created interior spaces independent of nature. The severed relationship between nature and interior office spaces have led to countless studies and innovation in building technology. Aside from developments in acoustic comfort and space flexibility, lighting design has become a major component in creating interior spaces focused on inhabitant wellness. As LED lighting becomes the standard in projects across the nation, designers and manufacturers are pushing the envelope of the current technology. Research is being done in hospitals, schools and commercial office spaces to further understand how LED fixtures help repair circadian rhythms via tunable white lights. These fixtures are increasingly popular in the lighting controls industry and in practice due to their wide range in recreating daylighting values from 2200 Kelvin (K) to 6500K. Tunable white lighting fixtures simulate the entire white light spectrum and are dimmable. As we learn more about the health benefits of recreating the range of day lighting in interiors, the advancement in the technology of LED chips and automated controls are becoming more mainstream. The ease of product availability and implementation of these products on a commercial and hopefully residential scale will allow tunable white lights to be more than a trend.
Method:
Case studies of open office projects that implemented lighting technology focused on the end users. Research includes interviews with architects, lighting designers and engineers.

Results:
Several factors contribute to HCD and the overall wellness of inhabitants in a project. The architecture/interior design of the space (circulation, access to fresh air or daylight) and light based wellness measures helped increase human comfort in the work space. Advancements in LED technology are creating tunable white lighting and controls but it is still important to provide access to natural daylight as much as possible. The cost and feasibility of implementing tunable white lighting differs greatly from project to project and is often removed during value engineering phases.

Conclusion:
HCD, health and wellness are changing the design of open office spaces and in turn other interior spaces as well. Other factors contribute to the discussion but LED lighting and advancements in control technology are at the forefront. As the benefits of tunable white lighting catch on with the general public we can make sure these elements are not value engineered out of projects.

REFERENCES

ABSTRACT

Question
Older adults want to age-in-place due to connection with their home, familiarity with the environment, and a desire for independence (Wiles, Leibing, Guberman, Reeve, & Allen, 2011). For the sighted person, quality lighting enhances the function, safety, and enjoyment of a home, and LEDs are a popular lamp choice. Lighting choices for older adults should enhance their vision. Several age-related vision impairments result from the hardening and yellowing of the eye’s crystalline lens leading to reduced visual focus, color contrast, color saturation, color perception, night vision, and dark adaptation (Shikder, Mourshed, & Price, 2012). A perk of aging-in-place is the privilege to select lighting that best fits one’s needs and fosters self-care. This study investigated the use and flexibility of tunable LEDs in senior environments.

Framework
Little research exists on LED lamp type preference testing for correlated color temperature (CCT) while maintaining the same lumen levels for the older eye. When using an LED lamp, the lumens per watt (lm/W) decrease when lowering CCT to the warmer hues such as 2700K. Inversely, when raising the typical LED lamp to a higher CCT, the lumens increase with the bluer white light (Willmorth, 2016). Older adults require more illuminance to see clearly and will select a
higher CCT light source when tested. Therefore, research questions focused on determining older adult a) preference and b) task performance in LED correlated color temperature (CCT) or Kelvin (K) levels while maintaining constant lumens. The researcher also sought to determine the effect of age, gender, visual acuity, and visual medical conditions on LED correlated color temperature (CCT) or Kelvin (K) lamp preference while maintaining constant lumens. Data collection targeted the LED color temperature preference and its effectiveness in a task light setting. A pilot test refined the testing procedure. Test subjects included 34 visually active adults from 70-100 years of age. Subjects completed both a reading and number matching test within a customized 3’x3’ test box (O’Conner & Davis, 2005) equipped with an overhead tunable LED (Appendix A). The Ketra adaptable control, tunable S38 LED lamp and fixture (Appendix B) provided four correlated color temperatures (CCT/K): 2700K, 3500K, 4100K, and 5000K. Lumen output between the correlated color temperatures was adjusted for consistency to prevent illuminance (lumens) from effecting the outcome. Test subjects chose a preferred CCT and completed a subjective survey accessing the preferred comfort level. Task error scores and time scores were recorded. The CCT preference was determined by use of a CL-500A Illuminance Spectrophotometer light meter (Konica Minolta, 2017; Appendix C). Data analysis investigated the effect of color temperature on test score and time as well as the correlations of age, gender, visual acuity, time of day, and visual medical conditions to LED preference.

Results/Conclusions
Results indicated that test subjects performed best with the 4100K correlated color temperature. The ranking of CCT preferences reveals that 4100K was preferred first (36%), 3500K was preferred second (28%), 5000K was preferred third (24%), and 2700K was preferred least (12%). A significant difference existed between men and women with men taking longer to complete the reading and number matching tasks than women. Visual acuity did not affect CCT preference but did affect test performance with 20/20 vision performing best in errors and time. Most test subjects self-reported no colorblindness, but some had difficulty passing the colorblind test; perhaps the yellowing of the aging eye lens may occur without the individual noticing reduced color discrimination. Study findings may benefit the home modification market. The efficient LED not only saves energy but provides correlated color temperature that is both acceptable and supportive for older adult visual task performance.

REFERENCES
Under Construction: Historic preservation and its relationship with place attachment and user comfortability

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ABSTRACT

Purpose:
As communities renew their urban landscape, it is essential to evaluate the role of historic preservation as a viable option in commercial settings (Tucker 2012). This research analyzes the relationship between historic preservation, place attachment, and user comfortability to assess the validity of preservation and its benefits to the surrounding socio-cultural landscape.

Context:
Recent studies have explored historic preservation, place attachment, and user comfortability separately and developed some interwoven concepts (Milligan 2007). For example, Cross (2015) establishes a connection between historic preservation, place attachment, and user comfortability by analyzing place attachment and its affecting factors. Primarily, existing research is studied within the context of place attachment, which often references comfortability. However, these studies tend to view comfortability as a secondary aspect rather than an independent factor with its own variables. Nevertheless, current research lacks exploration of the relationship between historical settings and the effects of these spaces on comfortability and place attachment. This gap is largely due to segregated areas of research that either focus on the importance of historical
settings to cultural narrative or on creating comfortable environments that encourage place attachment (Glassberg 2008; Marcus 2006). This study develops connections between historic preservation, place attachment, and comfortability to contribute to past and current analyses, specifically for commercial design applications.

Method:
This study uses historical methods of inquiry supported by three case studies. The case studies, which incorporated interviews and photographic analyses, took place in three historic spaces: a museum, a bed and breakfast, and an event venue. Additional data was acquired through statistical and artifact analyses, interviews, and a review of individuals’ reflections on place attachment. The resulting data was coalesced to understand dominant themes and preferences.

Findings:
Findings show that historical settings offer both social and physical attachment through physical objects and the built environment. Over the course of the study, it became apparent that although individual taste varies, many users share similar attractions, such as woodwork or overall craftsmanship. During interviews, subjects commonly remarked, “things just aren’t made this way anymore.” Many individuals were nostalgic and drawn to the character of the building, which they expressed newly built and renovated spaces lack. Case studies conducted at the historical sites, which varied in management and function, provided insight into historical narratives, which influenced the users' experience within the space. The narratives between the sites differed greatly, however, each exhibited a broader narrative, free from restriction to any one historical period or story. A primary theme emerged from these findings: history is not static. Outcomes were applied to a prototypical design to better understand this theme for a design setting.

Advancement of Design Knowledge:
History is ever-changing, it is not static. Inspired by discussion with a participant during the photographic analysis, this theme became apparent and was stressed in the prototypical design. The narrative contrasts with expectations of most users, who upon visiting a historical setting, expect a curated period of time that follows a narrow scope of view. Broadening the story, reveals the truer scope of the site's cultural narrative, which encourages the community's attachment to place. Although the findings were applied to a specific historical building, this study is generalizable for other commercial settings and can be utilized by historians, designers, and
developers alike to better understand the benefits of historic preservation in creating comfortable environments that stimulate place attachment.

REFERENCES


Environmental Affordances of Person-centered Care in Nursing Homes: Attributes that Contribute to Positive Outcomes

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ABSTRACT

This research presentation will describe results from detailed environmental assessments on ten nursing homes; five at early stages of person-centered care (PCC) adoption, and five at advanced stages as documented and monitored through a state-wide pay-for-performance program. Implementation of PCC in nursing homes requires multiple strategies related to organizational, operational, and environmental practices (Shier, V., Khodyakov, D., Cohen, L. W., Zimmerman, S., & Saliba, D., 2014, p. S8). The theory of environmental affordances will be used as a perceptual framework for understanding how PCC behaviors can be enacted within a space based on how the user perceives attributes or artifacts (Gibson, 1979; Maier, Fadel, & Battisto, 2009). This construct was originally explored by Gibson (1976) as a means for articulating the complexity of the perceptual systems and how they react to the opportunities afforded to them through their surrounding environments. This theory has since been extended into other fields of study, including architecture/interiors and can be used to assess the effectiveness of intentional planning and design strategies for user-environment outcomes (Topo, Kotilainen, & Eloniemi-Sulkava, 2012). Affordances are distinguished from other types of interactions by the potential usefulness of the relationship (Maier, Fadel, & Battisto, 2009, p. 397). Recognizing the details of the combinations of practices and the environmental features in nursing homes that work in co-occurrence is critical in advancing and sustaining meaningful change for residents and staff in long-term care settings (Shippee, Hong, Henning-Smith, & Kane, 2015, p. 573). Descriptive
environmental assessments of ten nursing homes provided detailed narratives of the combination of organizational, operational, and environmental variables present. These assessments included multiple data collection strategies. Environmental inventories were conducted to document the composition of the spaces within the building and their relationship to staff work areas (SWAs). This involved plan verification and analysis, photo documentation of the (primarily) interior components related to the PCC domains, documentation of key functions and environmental supports present or absent, and documentation of staffing patterns including the temporal and daily schedules based on SWAs. An analysis of data collected from these ten case studies demonstrate that environmental affordances are integral to patterns of effective and meaningful organizational and operational practices. Attributes of the environment and organizational design included, noticeably smaller SWAs; staff organized to be dedicated to each SWA; the presence of shared spaces for residents within SWAs in addition to shared spaces for the entire home; and an investment in both large and small environmental and operational modifications to create positive affordances for both residents and staff. Other spatial characteristics that distinguish nursing homes that have achieved high-levels of PCC include having architecturally defined SWAs with dedicated staff for at least two of the three care staff shifts. The amount of area being covered by most staff ranged from 4,587–12,240 sf. Only one home had floating staff only on the night shift and this building was smaller with only three SWAs. Even when staff float between areas on the night shift, the average area is 10,711 sf – this was nearly 40% less area homes that do not have comprehensive PCC practices. The presentation with discuss how designers can apply this framework as a means for more clearly articulating the outcomes of design features and placement of artifacts within spaces that align with organizational policies and approaches to the delivery of care. Further, the value of using this construct for design researchers to empirically document the attributes of a space and evaluate the efficacy of the potential outcomes for users will be explored.

REFERENCES


Ask Me: A Pilot Study to Identify the Housing Preferences of Youth with Neuro-diverse Disorders (ND)

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ABSTRACT

A collaborative partnership was established between the researchers, a public Human Services Department (HSD), and several non-profit organizations to investigate the supported housing preferences of transitioning youth with neuro-diverse disorders (ND). ND include Fetal Alcohol Syndrome Disorder (FASD), Autism Spectrum Disorder (ASD), and Traumatic Brain Injury (TBI). Although ND have distinct causes and effects, they share commonalities, e.g. difficulties in socializing, emotional volatility, and behavioral problems in response to stress (Bruer-Thompson, 2016). People are affected differently across a spectrum, some able to work and live independently with little support, others unable to live independently needing fulltime care. Currently the HSD provides supported housing for individuals with mental health issues. Within this group live a number of youth with ND whose particular needs are not being met by this type of accommodation. The aim of this project was to find out from transitioning youth with ND, specifically FASD, ASD, and TBI, what their housing preferences were and what targeted accommodation would look like. This is a group who are not often asked their opinion. This project is important because of the increasing numbers of people diagnosed with ND who need housing provision now and in the future. Estimates are that 2-5% of babies born each year may have FASD (CDC, 2017a). The number of children diagnosed with ASD is estimated at 1:68
(Baio, 2012). TBI effects some 1.7m people annually (CDC, 2017b), an unknown number requiring ongoing support. Transitioning youth with ND preparing for some degree of independent life need suitably designed housing. The following research questions (RQ) supported the aims: 1. What do transitioning youth and parents/caregivers of transitioning youth with ND aged 16-24 want in residential housing design? 2. What common characteristics/differences are there in housing design preferences for transitioning youth with FASD, ASD, and TBI? The findings would be used to: a. Develop a set of evidence-based guidelines for design of residential housing for transitioning youth with ND that the HSD or a non-profit could implement. b. Create a Demonstration Project, an apartment in a supported housing unit designed for a youth with ND and conduct a post-occupancy evaluation to find out their views about the accommodation. The results could lead to a larger implementation project. An online survey was developed in Qualtrics to answer the RQ. The survey instrument consisted of a 40 item questionnaire designed with input from all partners. Scope included location, e.g. proximity to shops, clinics; transport, e.g. ability to drive, need for public transport; level of self-care or assistance; and preferences for cooking and dining. The survey also aimed to find out what environmental factors caused stress in transitioning youth with ND, e.g. noise, crowding. A link to the online survey was sent by non-profit partners to their members. 38 started the survey but only 19 completed it, perhaps because the number of questions overwhelmed some respondents in this population. Findings were that 73% of respondents reported difficulty remembering things and getting organized. When designing homes, designers could consider ways to ameliorate these difficulties. 73% said they would like to live somewhere they could have a pet, an important consideration as many facilities do not allow pets. 36% expressed preference for living in an apartment with common space, endorsing the supported housing model. 42% said they would be interested in working with designers to help design spaces, indicating an opportunity for designers to include youth with ND in programming and design decisions. A limitation of the study was that survey distribution was restricted to non-profit partners. This pilot study could be used to survey a wider population to increase our understanding of the housing needs and wants

REFERENCES


Refugees Housing, Healing Through Giving

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ABSTRACT

The refugees' state of affairs has been a political and a humanitarian issue; whether there will be a political solution or not, a communal social solution needs to be discussed. A refugee is any person who has been forced to leave their home in order to escape war, persecution, or natural disaster. Having a refugee housing would not only prevent a resettlement crisis but also it would also improve social integration. In 2016 there was 65.6 million people who were forcibly displaced worldwide, 22.5 million refugees, 10 million stateless, and only 189,300 refugees restated. These numbers show the need for international action to solve this settlement crisis (United Nations High Commissioner for Refugees, 2015). On 20 October 2016 the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, published the New Urban Agenda. Article 28 states the insurance of the human rights for refugees regardless of their migration status and with supplying the help for the host cities, understanding the challenges that can face the hosting cities in handling large number of refugee, knowing that this integration can bring significant social, economic and cultural contributions to urban life (HABITAT III, 2015). This proposal will investigate how an interior can adapt to support the diverse lifestyles of household’s short-term residence, allowing flexibility, and adaptability with consideration towards sustainability of the whole space. In order to find the method of designing this program, these are the goals that need to be fulfilled in the program. First, socially, the program should allow the refugees to become part of the communal society which they will be exposed to. Second, economically, efficiency in terms of the cost in a way to achieve results without adding any excessive demand. Third, humanitarian, the program comprehends accepted moral and human rights principles. The target is to design a place that can accommodate up to 150 people. Program information was inspired after the study of CAPSLO
homeless services center and MLK1101 Supportive Housing. In a way to help individuals and families in need of shelter, Gwynne studio designed a housing shelter that provides housing, medical services childcare, and resource areas to help residents secure employment for a self-sufficient and successful future. The program will accommodate community rooms, kitchens, offices, and dormitories containing 200 beds for men, women, and children (Rao, 2014). As for MLK1101, the veterans housing complex is designed with the focus on welcoming nonresidential by adding corrugated aluminum façade to create light flows. The housing also includes retail and a courtyard where both function as a social gathering space (Zara, 2017). Through history, Richmond Virginia showed a high refugee acceptance rate, by 1980 the U.S. Census reported 800 Vietnamese for the Richmond metropolitan area; by 1990 the combined Cambodian and Vietnamese population to be over 3000 (Haines, D. W. 2010) only to be dropped to 871 in Virginia only 280 in Richmond (Bruno, 2017). Reestablish Richmond, Commonwealth Catholic Charities, and World Horizons USA are the main three non-profit organizations in Richmond that help with the settlement, teaching, and community engagement (Richmond, 2017). This thesis will study the definition and the solution of humanitarian Interior design by creating refugee housing and a community hub. The study will provide a solution that will avoid segregation and will provide communal interaction. The purpose of this thesis is not to fill a need for Richmond but rather creating opportunities for refugees in Richmond by enabling access to services that benefit their future, recalling for social action to be prepared and welcoming for refugees, in the hope that during the process a community racial healing can be achieved.

REFERENCES


Supporting active living at home through interior design: older adults’ acceptance of interior design features and assistive technologies

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ABSTRACT

Implementation of design strategies and technologies in the built environment to support physical activity and reduce sedentariness to combat obesity and other chronic diseases has already been encouraged in health-related building standards, such as the WELL Building Standard, v.1 (2017, p. 107). Such standards go beyond the basic spatial needs for physical activity, and emphasize the significance of interior design features and technologies, such as universal design, biophilic environment, circulation patterns in relation to health and active living. However, to date, most research that focused on barriers and opportunities for active living provided by the built environment has been at neighborhood and urban scale, and examined walking and bicycling (see Cunningham & Michael, 2004; Kerr, Rosenberg, & Frank, 2012). While a significant portion of older adults prefer to age in their current homes, most of their residences lack the necessary design features to support independent living in a safe, viable way. A recent systematic research review examined the interior-scale environmental factors of homes and residential environments in supporting or inhibiting seniors’ active living and sedentary behavior (Ahrentzen & Tural, 2015). While accessibility-oriented features dominated the studies and findings, the study underscored “the lack of quality research that goes beyond prototype development or descriptive...
research, and examines the relationship of assistive technologies and active living” (Ahrentzen & Tural, 2015, p. 595). This study aims to fill this research gap, and address how environmental modifications and interior applications of electronic and non-electronic assistive technologies can support active living of older adults with a range of income levels, going beyond basic accessibility factors. Utilizing the Technology Acceptance Model (TAM) framework—a frequently used model to predict user acceptance of any technology, based on perceived usefulness, perceived ease of use, and perceived affordability factors (Davis, 1989), the main objective of the study is to determine seniors’ initial perceptions and attitudes toward currently available interior design features and ambient assistive technologies that would support active living at their homes in relation to their age, gender, educational attainment, and current health and physical activity levels. The data collection instrument is a survey questionnaire that includes visuals and brief textual information to explain the use, benefits and cost ranges of active living features. Through this internet-based and face-to-face survey of about 100 community adults who are 50 and older, the study identifies active living-supportive and cost-effective assistive technologies and interior design factors that would be most acceptable to seniors. The findings are discussed primarily with respect to environmental modifications that comprise universal design features, and indoor environmental controls, such as lighting and sensor-based controls. The visually-presented findings highlight low-, medium-, and high-tech design features that support active living for different older adult groups. This study addresses the critical gap in industry knowledge on how to foster active living in seniors’ homes through applications of interior design and assistive technologies. In that sense, the research has practical applications for design practitioners by providing design guidelines for healthy residences that support active lifestyles, and will provide evidence-based design and policy recommendations for physical, social (mental/emotional), and financial wellbeing of older populations.

REFERENCES


Six Principles for Inclusive Design for Vision

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ABSTRACT

Introduction
Vision is the most widely used sense by the general population. Typically, people receive information about a space based on all of their senses collectively: smell, sight, taste, sound and touch. This ability is known as sensory integration and is essential to achieve a coherent perception of a situation and to decide how to act (Iarocci & McDonald, 2006). Sensory processing disorder is diagnosed when sensory signals do not integrate to provide appropriate responses. Visual sensitivity can be incredibly disruptive and challenging to cope with for individuals with sensory processing disorder. Like most sensory symptoms, visual sensitivities can mostly be categorized as hyper-sensitive or hypo-sensitive. People with visual hyper-sensitivities may appear to notice everything in the environment and intensely focusing on the most minute of visual details. Visual hyper-sensitivities may also be exhibited by a difficulty making eye contact because of the intolerance for the movement of another person’s eyes (Grandin, 2006). Contrary to the often overwhelming effects of visual hyper-sensitivity, visual hypo-sensitivity is almost like possessing a visual impairment. Some individuals may enjoy bright colors and bright lights, things that would be overwhelming, even terrifying for an individual with visual hyper-sensitivity (Gaines, Bourne, Pearson, and Kleibrink, 2016). As with all sensory symptoms, both hyper- and hypo-sensitivities, occurrence and severity vary widely.
The purpose of this study was to develop evidence-based design recommendations for individuals with visual processing difficulties.

Method
The theoretical framework for this study was Sensory Integration (SI) theory. After a review of literature, IRB approval was obtained. A mixed methods approach was utilized to gather data including 1) interviews, 2) observations and 3) surveys. Data was collected from over 600 individuals through the three methods. The target population was individuals with sensory integration disorder and their caregivers.

Findings/Relevance to Interior Design
The findings show that individuals with sensory processing disorder view their environment differently than the general populations. The researchers observed that visually hypo-sensitive persons often see only the outlines of certain objects and might prefer bright colors and bright sunlight. Furthermore, individuals frequently avoid eye contact with people and use their eyes more directly to examine objects. Deferential eye gaze and pointing is a prominent observed behavior. This differentiated vision appears to produce distorted perceptions and individuals were often unaware of the presence of other people when they were involved in tasks such as drawing, painting and working. Six predominant themes emerged in the analysis of the data. These themes were categorized into the following recommendations for designing for inclusion: legible, boundary, transition, predictable, flexible, and hidden. Each of these themes were further dissected to develop practical guidelines based on design elements and principles. These outcomes are useful for researchers and designers to develop improved environments for individuals with visual sensitivities as well as the general population. This presentation will explain each recommendation and provide practical examples for integration into interior spaces.

REFERENCES
Control through Interior Design: how segregated correctional environments affects behavior

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ABSTRACT

Research regarding interior environments examines many building types, but some are not traditionally within the field of interior design, but deserved to be studied as such. These interior environments frequently have tremendous social impact that often remains hidden (Foucault, 1995). This study began with an historical analysis that looked at surveillance and architecture and how that affects power (Andrzejewski, 2008). This led to the present work that utilized the concept of control to engage stakeholders in solitary confinement situations to determine how their behavior was affected by environmental factors within correctional institutions. This presentation will focus on research findings that were the result of this qualitative research study. Two sets of interviews and observations were conducted with groups of administrators, architects, correctional officers and inmates at both the newest and the second oldest state correctional institutions. All participants had experience with segregated housing units, which we know as solitary confinement. The researcher, who is an architect, interior design educator and interior design doctoral student, utilized a grounded theory approach that investigated how design and design research is done for segregated housing environments (Charmaz, 2011). The social impact of the smallest design decisions within these environments have tremendous power to affect behavior. Sequential codings of the data resulted in the emergence of particular concepts. Within the findings, themes of trust, views to nature, sound, routine and time emerged from the work. Time is experienced differently in prisons by all, and routine is the mechanism to deal with the expanse of time. Environmental characteristics of views to nature and sound affect the prisoner in important ways and trust is the variable that relates to the personal security of all
officers when bonding with their colleagues. These interior environments are profoundly affected by the design decisions that control the daily workings of both prisons. These buildings that were separated by one hundred years reflected paradigms of punishment versus rehabilitation. The findings of this study will provide insight to the design of the next generation of correctional institutions (Paez i Blanch, 2014), and will provide critical environmental and behavioral insights to the interior design educator in both their teaching and research endeavors. References


REFERENCES

Using a Design Thinking Framework to Develop Empathy for Syrian Refugee Children

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ABSTRACT

The Syrian refugee crisis has caused displacement and suffering on an unprecedented level in modern history (“Syria: The worst humanitarian crisis of our time,” 2015). According to the United Nations High Commissioner for Refugees (UNHCR) the current number of people who have fled Syria due to political conflict has reached 5.2 million, and nearly half of those refugees are children (UNHCR, 2017). The Syrian conflict has now lasted longer than World War II, and the reaction to the suffering of the Syrian people by the citizens of countries around the world is in danger of sliding into apathy. This is a cause for concern because humanitarian support and political pressure from other countries is critical to addressing the needs of the Syrian people (Denselow, 2016). Empathy is defined as the cognitive ability to observe and understand the emotions of another person combined with the affective ability to share those emotions, often resulting in sympathy or concern (Sagkal, Türnüklü, & Totan, 2012). It involves connecting with another person’s inner state, being in tune with their thoughts and feelings, and experiencing what it is like to live in their world (Bohart & Greenberg, 1997). This research project brought together a diverse group of stakeholders, including interior designers, design educators, architects, and other creative professionals, to collaborate with people in fields related to refugee support, psychology, childhood education, and issues specific to the Middle East. These people collaborated in a series of design thinking workshops aimed at developing deeper levels of
empathy for refugees, while also finding solutions to benefit the lives of Syrian refugee children. A final workshop was conducted with parents and children between the ages of 8 and 12 to gain further understanding into the development of empathy for children. The ability of people who have no experiences as refugees to contribute ideas to address the problem was examined and their level of empathy in relation to refugee children before and after the workshops was measured. The result of the study was that both adult and child participants reported higher levels of empathy at the conclusion of the workshop, along with a desire to become personally involved in the refugee crisis and to use their creative abilities to address this issue. In the 2017 Professional Standards for CIDA, Standard 4, Global Context, asks that interior design students develop a global view of design, and that programs expose students to current events and a variety of norms experienced by people in cultures other than their own. Design thinking workshops can be used to develop empathy in students as they are exposed to global and humanitarian issues. By developing empathy this method of human-centered design can inspire students to internalize the issues faced by people in circumstances other than their own, and to begin to take ethical considerations into account when making design decisions.

REFERENCES

Bohart, A., & Greenberg, L. (1997). Empathy: Where we are and where do we go from here? In A. Bohart, & L. Greenberg (Eds.), Empathy reconsidered: New directions in psychotherapy (pp. 419-449). Washi


Pause and Play: A Participatory Design-Build Collaboration

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ABSTRACT

Design/Build projects by design schools are one of the few places where design research and praxis can intersect. (IDEC 2017) In education, design-build projects are a pedagogical alternative to the theoretical, desk-based, studio projects that usually used as a mode of representation drawings and models. (Canizaro, 2012) In Fall 2016 an RFP for conceptual models for the first Prototyping Festival in the state was issued. The call asked for temporary projects that activate public space and engage the community toward enhancing connectivity and vibrancy in the state’s third largest city downtown during a three- day event in Fall 2017. While the planning committee sought proposals of complete prototype ideas from all types of disciplines and perspectives, this funded studio proposed a participatory collaboration between graduate students in Interior Architecture and children from a local public school to reflect on the relation between culture and play. The faculty’s intent was to use the Prototyping Festival funded by the National Endowment for the Arts as a catalyst for creating an integration of design and build program within the Interior Architecture curriculum. This was the first funded design and build studio within the Master of Interior Architecture in one of the largest universities in the southwest of the United States. This craft-based pedagogy usually allowed students to utilized pre-fabrication as a mean to improve and optimize the installation fabrication. There is an extensive body of literature on the benefits of design and build pedagogy in architectural programs, but very little has been written about the benefits for interior architecture education. Most architectural programs that offer design and build pedagogy have as learning outcomes “to extend students’ design skills by making a stronger link with material experimentation and construction” (Wallis, 2007: 201-202),
“to realize a project and, through that process, explore and learn about design, material properties, fabrication, and construction techniques” (Better, et al, 2002: 180-182), and “to build and illuminate structures without concern for client programs, code requirements, or change orders” (Fisher, 2008: 123). However, this graduate studio in Interior Architecture besides the aforementioned goals, also sought the challenge of designing with the community as a mean to improve design students empathetic skills through the participatory collaboration and to expose students to design ephemeral experiences, instead of the traditional indoor-interior studio projects. How can this project establish a compatibility between design-build, academia and community, and theory and practice? What is the potential contribution of interior architecture to the scale of a city’s urban fabric? The traditional studio project with standard deliverables that include drawings, models and or movies seldom result in long-term learning experiences. This design-build full scale project afforded learning experience outside the ordinary Interior Architecture curriculum. While at moments students felt it would be impossible to accomplish, the cathartic feeling of having it complete surpass the expected learning outcomes. Since day one, students could not wait to have this project in their portfolio, but their original intention became irrelevant as this life-long learning experience open new doors and questions for them, it became a catalyst for subsequent learning.

REFERENCES


Virtual Reality for Design Studio Critiques: Experiences of Students and Impacts on the Design Process

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ABSTRACT

A designer’s ability to visualize the spatial characteristics of an interior is one of the main skills used to solve design problems (Guerlin & Nussbaumer, 2000). Effective designers accurately visualize multiple spatial ideas simultaneously to work through, evaluate, and build upon various solutions to a given problem. Throughout these iterative design processes, both students and professionals rely on spatial thinking to develop and simulate these design solutions, but - in most cases - students lack the experience necessary to adequately visualize interior features associated with space (e.g. scale). This is primarily because the current tools of representation are noticeably limited to the two-dimensions of visual information that are viewable on a traditional computer monitor or sheet of paper. Although the design of the spaces can still be analyzed and revised with these traditional methods, graphic representations do not provide a full scale spatial environment to experience, nor do they provide the means to maneuver through environments in a natural way, as future inhabitants will ultimately do. Rather, current design tools provide only scaled representations, requiring the student to imagine themselves looking and moving around the space. This process is susceptible to mistakes in spatial perceptions because of the required changes in scale (Henry & Furness, 1993). Emerging technologies, like virtual reality, present accessible solutions to these traditional design challenges by providing a low-cost but volumetrically accurate means to develop the spatial thinking abilities of would-be interior designers. Insofar as they respect real world scale and natural, body-centered interaction paradigms, the use of virtual reality systems also supports instruction focused on spatial
reasoning. Immersive cohabitation, facilitated with virtual reality systems, allows multiple designers (or instructors and students) to conceptualize and reason volumetrically by partnering within detailed and complex model – at full-scale, in three dimensions. As a result of key platform characteristics associated with breadth and depth of the interactive visual field, these systems can help students determine if their design solutions will function spatially (Ragan, et al, 2013). With this system, faculty are provided the means to create first-hand learning experiences in “full-scale” immersive architectural environments; environments that are typically only possible to study at full-scale post construction. As a design analysis and critique tool, virtual reality platforms were integrated into the senior level Interior Design Capstone course. Critique sessions were held in immersive full-scale environments simulated with virtual reality platforms throughout the semester. The first sessions began with an analysis of the existing spatial conditions (core and shell) of the buildings with additional sessions continuing through schematic and design development stages of the project. The student presenting their project development acted as the “driver” within the virtual reality platform while one other student and the professor could simultaneously experience, study, analyze, and provide feedback about the design during the critique sessions. This presentation will share exploratory data suggesting how virtual reality systems can benefit undergraduate interior design processes by providing a means for accurately visualizing interior spaces. The presentation will also explore the experiences of the students and faculty using two types virtual reality platforms, and the challenges and impacts of incorporating full-scale analysis into the student’s design process.

REFERENCES


What does a tree have to do with Interior Design?: Rethinking the foundational process, perception and experience

Helen Turner, University of Kentucky

ABSTRACT

A design problem focusing on the creation of a conceptual tree crutch for a local historic tree introduces first year students to the design process and provides a foundational experience that expands the notions and perceptions often associated with interior design. Countering the idea that interior design is primarily aesthetic, is either residential or commercial, and most often occurs within four walls, first-year interior design students instead focused on experience and human interaction. Students engaged the process of design through sketching, making, research, dialogue, critique, and presentation. Insightful self-assessments and reflections reveal students’ perceptions about the project’s application and its relevance to their education as well as the overall purpose of interior design, merely four weeks into the fall semester. Reflective Question: What does a tree crutch have to do with interior design? Anonymous Student Responses: · “The forest itself is an “interior”. The tree crutch also forms an interior that fosters communication, interaction, and an overall feeling for the person experiencing it. This project makes an overall experience for people which is one goal of interior design.” · “Nature within itself is an interior space. One does not need to technically be indoors to experience an interior. The tree crutch itself also creates its own interior space showing that there are many different levels and scales of interior spaces.” · “This project relates to interior design because design revolves around the idea of human interaction. In this case, that interaction was with nature, and it was our job to create a cohesive design that brought the two together.” With a previous emphasis on concept development and hand skills, faculty responded to feedback that the first your studio
often felt like a series of craft projects by revising the curriculum to emphasize “design” as a noun and a verb, wherein it can refer to a product or a process (Lawson 2005). Oscillating between thought and action, faculty represent it as a methodology for analyzing and solving complex problems while encouraging creative thinking and meaningful play. Much like Froebel’s gifts, sketching and making was maintained as a method of design exploration but, like blocks or crayons in a Kindergarten classroom, they related to the conceptualization of a tree crutch in an effort to “encourage imagination”, but not to “over-constrain or over-determine” (Resnik 2007, 2). As a microcosm of a real-world design project, students encountered all phases of design and were placed at the forefront of the process. This lead to deeper and more meaningful conversation, emphasized the importance of iteration, indicated value and techniques for presenting ideas and work, as well as provided students with the ability to give and accept critique. Self-Assessment Question: What are the most valuable things you learned from this assignment? Anonymous Student Responses: · “The skills I have gained in drawing and the aspect of looking at design in a broad view.” · “How to symbolize connections and correlations in the world through structures and drawings.” · “I learned that you can continually build on ideas and improve your work. I also learned that giving feedback is equally as important as receiving it because you can learn a lot from giving advice.” · “I learned the value of the design process. To take criticism & critiques as a way to further develop the concept & design. I also learned the value of the relationship between humans, nature, & design. There must be in depth critical thinking in the connection between a design & the world.” These and other qualitative student reflections will be shared during this presentation to encourage educators to think beyond the typical bounds of interior design and foundational projects.

REFERENCES


Boundaries | Scholarship of Teaching & Learning | Presentation

Living Systems >> Adaptive Boundaries

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ABSTRACT

In the book Alive: Advancements in Adaptive Architecture, the author declares that “among the most crucial aspects architects have to consider when designing spatially is the relationship between architecture and nature, built form and living system, anthropogenic construction and organic evolution. This applies equally to strategies of environmental responsibility, geological or meteorological impacts, anticipatory human behavior, transit occupation, or cultural, social, and demographic variety”.1 Attitudes towards nature have long been a defining factor in the design of interior spaces. Interior space in its most basic sensibilities implies an enclosure; a calculated separation from the external elements. Managing the exchange between exterior and interior has been dependent on generic architectural components such as openings, walls, etc. Although such static boundaries are sufficient when it comes to spatial separation and environmental control, they typically lack the ability to effectively (intuitively) mediate between the changes in the zones they segment/disconnect. This studio discussed here endeavored to redefine the very aspects of spatial design forsaking the common conventions of compartmentalizing space in favor of designing mediating boundaries that are reactive and responsive to environmental parameters and users’ needs. Informing this process was a rigorous examination and adaptation of systematic processes found in nature. Looking closely at the composition of organic systems and their adaptive functions is an emerging research area that exploits the principles, logic, and behavior of natural systems in the design of the built environment. The objective was to provide a research-based understanding of how such processes occur in nature and find their translation in the design of interior strategies. The activation of many organic processes is established and sustained through light. Therefore, the focus for the studio was light, both natural and artificial. In addition to the illuminative values of light, students explored its integration within material and textural
palettes. Light as such actively demarcates spaces through delineating shifting boundaries as it responds and adjusts to the programmatic activities it caters to. The semester was carried out through three interrelated phases: Phase 1: OPERATIVE LIGHT>SMART SYSTEMS IN NATURE Students examined models of living organisms whose biological processes and cycles are dependent on light. Such light is living, responsive, and integral to the subsistence of its host. Bioluminescence and other natural structures informed the design process as it inspired luminescent systems that not only reflect and/or absorb light, but also actively produce it. Phase 2: ADAPTIVE MATTER: SYNTHETIC INTERACTIVE SYSTEMS Derived from findings from phase 1, phase 2 involved the design of a complex membrane/system where light was an integral component of its makeup and directly affects its functions. The system’s design reflected the organic attributes researched and drew direct formal and functional inspiration from them. Phase 3: INTERNAL COLONIES: studies in ORGANIZED SPATIAL CLUSTERS The research, findings and subsequent phase 2 design was the premise for reinventing the programmatic use of the Whitney Museum Building in New York City to a Botanical Research Institute. Although the program assumed encompassing the entire building, the studio focused on developing interior strategies for the public relations’ sector and the herbarium. Building on the original design intentions for the building, the interior design concepts reinforced the exterior/interior overlap. It further advanced this overlap through employing adaptive and responsive internal strategies, postulating that the innovative spatial application of design sensibilities afforded by models in nature does increase the efficiency and aesthetics of interior spaces.

REFERENCES

Proto Modular | Critical Settings: experience learning in the age of digital fabrication

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ABSTRACT

Material modularization and prefabrication brought in by the industrial revolution resulted in many advances in how we design and build. Accessibility to various prefabricated material options allowed for increased speed and efficiency. With that, however, came a loss of customization and a tolerance of homogeneity, as the mode of production shifted to standardization. Currently, we are amidst yet another revolution that is reinventing the way we approach design from its conceptualization to realization. Kolarevic and Klinger define one aspect of this reinvention as "(re)emergence of complexly shaped forms and intricately articulated surfaces, enclosures, and structures, whose design and production were fundamentally enabled by the capacity of digital technologies to accurately represent and precisely fabricate artifacts of almost any complexity." The dissemination of new technologies, rapid prototyping, and advanced fabrication is enabling new ways of thinking about material properties, topologies, application methods, and range of use. Most importantly, it is reintroducing -at the scale of the modular- customization to the prefabricated settings. Within this context, the studio involved a creative process that looked outside the traditional boundaries of design and pursued new opportunities in material experimentation and novel tectonics. This exploration was informed by advanced computing and fabrication methods introduced to the factory production processes of a traditional modular, ceramic tile. In collaboration with a leading American manufacturer of sustainable tile solutions, the studio worked on designing innovative approaches to tile applications that combined the materials’ attributes and appeal with new functionalities. The students were invited to propose interventions within the tile manufacturing process and/or on the
finished tile product. Coupled with inventing new tectonics details and application methods for tile, these studies attempted to exploit new performative logics for tile and employ them in critical programmatic contexts. The studio formed an industry partnership and allowed the students to directly experiment with the manufacturer's diverse product lines with assistance from the product engineers and marketing teams. It is customary for industry and products to shape pedagogical trajectories; however, this collaboration was a unique opportunity for pedagogy to influence material processes and inform manufacturing logics. Comprised of two projects, the studio began with exploring modular materials and tectonics. Students focused on developing a framework for deploying digital design techniques with modular ceramic tile systems. The primary objective was to achieve geometric variations and functional complexity in the context of standardized materials and to invigorate the use of tile as an inventive material with varied permeabilities for spatial production. While challenging the boundaries of material process was the starting point for this studio, it was essential that these material processes and their applications find relevance in real life scenarios. As the studio title “Critical Settings” suggests, the main and second project focused on the application of innovative interior strategies to spaces of impact. Design as such carries an integral agenda and can deliver significant influence towards positive social change. While addressing the complex juxtaposition of the impervious and permeable from the standpoint of spatial and material configurations, the project speculated on the interior design of an at-risk youth center. The program navigated the dichotomy between refuge and portal and addressed the complex politics of belonging. The conclusions drawn from the studio proved that fabrication ensues efficient and viable trajectories to customization within current manufacturing processes.

REFERENCES

A Neoclassical Revival Inside an Altoid Box

Darrin Brooks, Utah State University

ABSTRACT

“The process of drawing imprints what you see into your brain in such a way that years from now the sounds of the people walking by, the scent of the rain, the feel of the warm air, and much more will flood back to you when you look at your sketch” (Bower, 2016, p.7). This project required students to analyze 2D drawings and recreating them into three dimensional representations. Renaissance architect, Andrea Palladio (1508-80) published I Quattro Libri dell'Architettura in 1570. They included lavish drawings including detailed plans, sections, elevations, and details from many of the famous buildings throughout Italy including the Pantheon and Villa Rotunda. This publication went on to influence Sir Christopher Wren (Tavernor, 2017). Detailed drawings of Bramante’s Tempietto, in Rome, is commonly thought to serve as the inspiration for St. Paul’s Cathedral. Napoleon traveled to Egypt in 1798, with a massive exhibition composed of scientists, engineers, and scholars to capture Egyptian history. Through meticulous field observation, they noted the intricate details of Egypt’s rich and complex culture. The result culminated with the first publications of Description de l’Égypte in 1809, which later grew to 23 volumes (Linda Hill Library, 2017). These publications of hand lithographs influenced design and architecture not only in France but throughout the world. Drawings have long influenced designers and architects. The practice of drawing and sketching are the foundation of design communication. Carlo Scarpo said, “I place things in front of me, on the paper, so I can see them. I want to see, therefore I draw. I can see an image only if I draw it” (Welton, 2015, p. xi). The practice of hand drawing is rapidly disappearing as the computer is thought to replace this skill. My dilemma was that if students see sketching and drawing as a dying art, how do I begin a revival in this classic skill? This project was conceived with the intent to motivate students to think of the process in a new way. After teaching a History of
Architecture/Interior Design Course for several years, I had graded hundreds of sketchbooks. My experience was that students were lacking engagement in transferring information into sketches, that were sophisticated, detailed, and accurate. They seemed lifeless. Framing a space within a box is not a new convention. Artist, Joseph Cornell, and others used boxes to encapsulate evocative assembles of objects and drawings. I was influenced by Jim Doran’s Minuscule Dioramas created in Altoid boxes and sardine cans (Morgan, 2016). As an experiment, I assigned the historical Altoid Box Project as a means of revitalizing and engaging students with hand drawing. The objective was to create an exterior, interior, or furniture object with an Altoid box using depth and perspective through multiple layers of paper. The results exceeded expectations. This brought model making to a new level. This set a new bar of student achievement as each subsequent assignment increased in quality, complexity, and sophistication. Drawing within their sketchbooks improved as skill and comprehension of detail improved.

REFERENCES


Culture and Its Expression in Architecture: Exploring Culture in Design from Environment-Behavior Studies’ Perspective

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ABSTRACT

According to Rapoport (2005), the role of culture in design is within the Environment-Behavior studies’ framework which is highly interdisciplinary. Rapoport (2005) states that within an Environment-Behavior Studies context, a consideration and an understanding of culture are extremely important in many domains including architectural design. The very essence of every architecture is the manifestation of culture masked behind its layers. Culture plays a dominant role in the architectural design process. When architecture is conceptualized to perform the desired function, the design concept is directly or indirectly derived from or synchronized with the cultural identity of the user and the environment. “Culture and Design” is a required course in interior design curriculum at our institution. It is also a general education course in the category of interdisciplinary or creative ways of knowing that opens to every student on campus. The main objective of this course is to nurture students to have a better understanding why and how architecture in the global built environment is designed by engaging in a contextual analysis and comparison of different architecture in the global built environment from Environment-Behavior Studies’ perspective. This presentation showcases the journey and destination of inquiry of the knowledge of cultural expression in design through cross-cultural comparison of architecture in the global environment. In this course, the fundamental framework is based on Rapoport (2005)’s notion that culture is a theoretical construct. Culture is not a ‘thing’ but an idea and a concept for many things people think, believe, and do and how they do them. Equally important, symbolic interaction theory also is part of the framework in this course because architecture as physical
forms express meaning. Symbolic interaction theory reveals that designed physical environment is not merely a backdrop for our behavior. Quite the contrary, because some designed physical buildings, places, and objects act as agents to shape our thoughts and actions; they invite self-reflection (Smith & Bugni, 2006). The major process of perception of architecture is that if cues in settings are noticed and understood, the social situation appropriate to that setting is identified, and appropriate behavior is brought to attention and elicited (Rapoport, 1990). Thus, the two-way interactions between environment and behavior are discussed extensively in this class. Therefore, based on the framework defined by Rapoport (1969, 2005) and symbolic interaction theory, the foci of this course have been put on culture expression in different building typologies and settlements, social-cultural factors and house forms; the influence of technology in modern architecture which is the metaphor of modernity, as well as famous architects’ work influenced by global business and economic effects, and conditions of the natural environment. The course outcomes are assessed by the rubrics derived in part from Association of American College & Universities (AAC&U) value rubrics: Reading, Written Communication, Oral Communication, Global Learning and Integrative Learning. According to the course assessments from the past two years (Appendix I, II and III), it revealed that the weakness of students’ performance is in the area of analysis of cultural influence on architecture. This is reflected in their narratives for the architecture comparison projects. According to Rapoport (2005), the mechanisms linking people and environments are cultural or related to culture or vary with culture. Therefore, based on the assessment, the cultural mechanisms that linking people and environment are addressed and emphasized in both lecture and the assignment as a meaningful improvement for the course. These cultural mechanisms are physiology, anatomy, perception, cognition, meaning, affect, evaluation, action and behavior and supportiveness (Rapoport, 2005).

REFERENCES

Rapoport, A. (1990), The Meaning of the Built Environment, Sage Publications, Beverly Hills, CA
Library Design: Authenticity, Acceptance, and Advocacy

Jamie Lynn Slenker, University of New Haven

ABSTRACT

Libraries have always been at the forefront of planning for new media, and the notion that the Internet and E-readers would lead to their decline has been dispelled. This is because they are not just warehouses of information or service points for technology. Public libraries are often dedicated landmark structures at the core of our cities and towns. So how do we re-envision the design of these spaces to embrace community and embody culture? In the words of Shannon Mattern, Associate Professor in the School of Media Studies at The New School in New York, “We need to understand how our libraries function as, and as part of, infrastructural ecologies — as sites where spatial, technological, intellectual and social infrastructures shape and inform one another. And we must consider how those infrastructures can embody the epistemological, political, economic and cultural values that we want to define our communities.” To begin, students were asked to collect case studies where attention was given to new technology and innovation in library design. They were asked to record trends and understand the motivations behind them. Investigation was extended to related practice areas revealing potential gaps. A partnership was established with a local library for the project. Students evaluated their mission and had access to strategic planning that engaged community stakeholders. They created goals and objectives that were not yet indicative of design solutions. Students identified user groups and their physical, social, economic, and psychological values and needs utilizing a framework for observation developed by Steelcase and Conifer Research. Critically observing an environment, reflecting on signs of struggle, and noting work-arounds was a focus. In comparison with student outcomes using hypothetical sites, culture and context was more authentically depicted. Students were introduced to third place theory and repeated the methods of inquiry in establishments where it grows organically to document human behavior and unveil aspects of
community vitality. When asked to observe as a social scientist, the interactions of those around them gave rise to unique and relatable design interventions they developed through a rapid prototyping process. Students mapped the users experience and navigated adjacencies through hands-on image linking and model building exercises. 9 of 14 weeks were spent in research and development to eliminate design assumptions. Student outcomes grew beyond precedent Kindle reading lounges and maker-spaces. Examples of social justice emerged addressing a city’s need for a heating and cooling space, an emergency shelter, and access to privacy for transient populations. More controversial topics such as the opioid epidemic surfaced and spurred investigation of public safe-use design tactics. Graphics and wayfinding equalized language barriers. To recount the words students used in their projects, they identified and designed for the needs of sanctuary, restoration, reflection, transparency, immersion in culture and the intersection of group identities. In summary, a presentation will explore how creating opportunities for students to unearth their own data set regarding the human experience drives empathy. Sample work will reveal library design that is authentic to a community, accepting of challenges, and celebrates advocacy.

REFERENCES

Beyond the Project: Augmenting Global Learning in the Studio

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ABSTRACT

How do you incorporate global context into the classroom? From the author’s experience as a Council for Interior Design Accreditation (CIDA) site visitor, she often sees programs approach CIDA Standard 4: Global Context with only one studio project where either the client is foreign or the site is in a foreign country. The hope is that this challenges the student to learn at least the basics of that culture in order to consider cultural differences and preferences in their studio project. Programs are often better at covering the “ecological,” “economic,” and “social,” aspects of Standard 4, while “cultural” issues are often minimal. As the Intercultural Knowledge and Competence VALUE Rubric developed by the Association of American Colleges and Universities states, “The call to integrate intercultural knowledge and competence into the heart of education is an imperative born of seeing ourselves as members of a world community, knowing that we share the future with others.” (Association, 2009, p. 1). So how can we augment that learning, encourage the students to go deeper, and learn about many other cultures and their relationship to design? The author will share strategies for increasing cultural competency through exercises and assignments that require students to learn about other cultures while simultaneously completing an in-depth student project with one culture. Intercultural Knowledge and Competence is "a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts.” (Bennett, 2008). These exercises help to build those cognitive and behavior skills. The in-class exercises explore a student’s cultural self-awareness. The assignments, or Cultural Understanding Activities (CUA’s), are a menu of options for the students to choose from and some require engagement in
on-campus activities. Through these CUA assignments, the student’s achievement can be assessed by six of the key components of intercultural knowledge and competence through the Intercultural Knowledge and Competence VALUE Rubric (Association, 2009, p. 2). The framework includes: Knowledge (self-awareness and cultural worldview frameworks), Skills (empathy), and Attitudes (curiosity and openness). Each activity requires the students to write a reflection paper. Using content analysis, the papers were qualitatively examined for words and phrases illustrating the six key components. One recent excerpt from a CUA where the student visited a Mexican restaurant states, “This experience was overall enlightening to me. It made me open my eyes to not only see what was around me, but to be curious about why those things are the way they are. If it were not for this assignment I may have never even thought anything about the meaning of a simple item on the desk (host stand) or thought to research about items hanging on the wall. This assignment has allowed me to view things in a different way and I will continue to do so in my future endeavors.” One other excerpt from a student’s recent visit to a Thai restaurant summaries the results of cultural understanding by stating, “Overall I thoroughly enjoyed this assignment. The subject is not only interesting but I also believe it makes me much more culturally aware. I think it’s also very applicable to current times in the media. It seems we have entered an age where demoralizing people is becoming a norm, making it extremely difficult to not trigger others. That’s why I believe assignments like this are important because we can begin to understand and respect other cultures we aren’t initially exposed to.” Analysis proves that the CUA’s have achieved increased knowledge and competence and while they have been quite successful at augmenting a student’s cultural awareness and understanding, the author is constantly seeking ways to further augment their experience in the studio beyond the project.

REFERENCES


How do you know: Evaluating the effectiveness of community engaged scholarship through photo documentation

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ABSTRACT

Engaged scholarship is a student-centered pedagogical technique meant to facilitate learning through active participation in projects outside of the traditional classroom (Van de Ven, 2007). It is the umbrella of participatory learning that covers many pedagogical techniques including service learning, which has been studied extensively across many disciplines (Boyer & Mitgang, 1996; Seifer, 1998; Zollinger, Guerin, Hadjiyanni, & Martin, 2009). A main goal of engaged scholarship is to expose students to key stakeholders’ perspectives in order to understand complex social problems through participatory learning (Van de Ven, 2007). However, how can educators be certain that student learning outcomes are being achieved? This presentation asserts that through the use of graphic imagery captured from the students’ perspective, educators can more accurately ascertain deeper learning outcomes. This presentation explores an immersive cultural experience through a study abroad trip designed to examine sustainability on a holistic level by positioning students in a remote location on the Northern Fijian island of Vorovoro. Sustainability is a complex concept that has many accepted definitions. Literature has documented the importance of sustainable design to the profession (Sorrento, 2012). For this project, students lived with the Mali tribe in Fiji for four weeks as an exploration of cultural and environmental sustainability. They were without electricity or running water during this time, living as the Mali tribe does. There were no formal lectures. Instead, learning occurred through discussions, by doing, and by conversing with the Mali tribe while working on projects. The
experience was fully immersive of the culture, and engaged students on every level with sustainable practices in the developing world. Research has shown that engaged scholarship experiences with reflection exercises will increase the effectiveness of student learning (Zollinger et al, 2009). As a means of documenting their understanding of sustainability, students were required to write reflective journal entries throughout the study abroad experience and also used photo documentation to capture sustainable concepts in practice. Photo journals were required as an expectation of an accurate reflection of deeper learning. Students wrote passionate entries, but their photo documentation depicted a singular perspective, not a holistic approach to sustainability. In their writings, students offered a playback of what they had learned from the experience, but that was not reflected in their imagery. Images did not reflect deeper learning. The purpose of the immersive experience was twofold. Students were expected to offer their perspective and assistance to the community and the community provided an opportunity to understand sustainability on its most holistic level. While it was evident that the outcomes were twofold, it became clear that while students experience life-changing growth as individuals, that growth did not translate holistically to their understanding of sustainability. This paradigm between student learning expectations and actual deliverables will be discussed and suggestions for future exploration will be offered.

REFERENCES

Creating Meaningful Spaces in Design Studios

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ABSTRACT

There are obvious upsides to having access to online information and opportunities for sharing, but there are downsides too, especially for design students. For one, with the access to overwhelming amounts of design inspiration, the student of the “Pinterest generation” often feels like everything has already been done. Further, there is a strong temptation for the beginner designer to echo what is already out there, but these “cut and paste” designs feel incoherent and empty. They are not unique to the student and lack identity, soul and are void of meaning. Responding to this concern, we created a design studio that aimed to help students successfully create unique, meaningful, and immersive spaces that are location-, issue-, brand- and artifact-specific. These spaces aim to be independent from trends and are more than an assemblage of pretty materials. We focused the studio around the construction of spatial stories. These stories are based on research that clearly demonstrates that the ability of utilizing the narrative helps students shift their focus from an aesthetic consideration of the design and focus on product, to an emotional connection with the design and a focus on the person. We use spatial storytelling to help students embrace multiple user experience perspectives and explore human-centered space making as a method to convey cultural content. (Danko, S., Meneely, J., & Portillo, M., 2006). The class employs a framework that involves exercising multimodal narrative methods at three different scales; one building on student’s personal experiences, and two driven by clients resulting in retail and exhibition typology. Project 1 The first warm-up exercise is a spatial experience project focused on the first-person perspective. Students draw from a multi-sensory journey through a meaningful space in the city with a special focus on personal meaning, historical context, tactile texture, and olfactory and acoustic integration. Students use a variety of interior design tools, such as concept-making, form-making, material specification methods, color
theory, and human behavior theories to create a spatial environment. The result is much like an art installation, where visitors can relive (the whole or a part of) the catalyzed experience. The results are presented in video format, a great medium of a multimodal narrative that includes methods of visual, verbal, and acoustic communication. Project 2 In the second project students respond to a consumer product that aims to combat a multi-layered global problem. Students are assigned to create retail spaces for these products where every design element is aligned to the story their brand aspires to tell. This story including the global issue, the story of the brand and product, and the lifestyle story of the targeted users. Project 3 The third project expands the preceding narrative explorations to a large scale when a museum exhibit space is inserted in an existing building for a real client. The story in this case was told through the design concepts, spatial sequencing, pace, display systems, graphic treatments and activities as well as the artifacts themselves. The students’ designs focus on mapping, and manipulating the visitor experience to create a meaningful environment and to contribute to personal relevance of the historical display. The student outcomes of these projects proved the theory that the application of the narrative method as a driving force in student projects promotes a heightened sense of user empathy, enhances multi-sensory conceptualization and visualization, and promotes a greater tendency towards holistic thinking (Danko, S., Meneely, J., & Portillo, M., 2006). In our classroom, using the narrative method, students created user and visitor-centered, coherent immersive spaces. They displayed empathetic approaches and as a result their spaces were unique to their story and displayed a lot of personal qualities.

REFERENCES

5. Tuan, Yi-Fu, Space and Place. The Perspective of Experience, University of Minnesota Press, 2001
**ABSTRACT**

“Our entire experience as a species over the past 50,000 years may be distilled into two words: how and why. These are the departure points of all inquiry, the slivers of insight around which cultures crystallize.” (Davis, p.7) Archeologists, ethnographers, anthropologists, and designers ask similar questions relative to cultural knowledge, technologies, and patterns of humankind. The opportunity to discover methods of cultural communication through artifacts (material and built environments) from cultures with extensive history offer new understanding and precedent for ongoing academic research, theories of cultural identity, and studio curriculum while informing meaning and making in interior design. Interior architecture is a compelling vehicle for the communication and transference of culture, grounded in design thinking and warranting the continued research of environments and its’ ability to serve as a tacit tool. ‘The particularities of place, when not valued and maintained, are far too easily rendered obsolete.’ (Buntrock, p.iv) The places designers create communicate collective ideas of a people, enabling the language of design to embody and realize culture as physical knowledge and experience. This presentation shares student outcomes from an upper school design studio, aligned to the instructor’s research in material culture, cultural -identity, -communication, and -sustainability, using theories of global migration, design research, design process, and experiential exercises to inspire intrinsic cultural relationships between geography, material culture, social ritual, and interior space. Examples of student work from this optional design studio focus on ‘place making for the transfer of culture’ and illustrate the contemporary challenge to integrate design thinking as a means of bridging cultural knowledge. Class meetings included ‘making circles’ providing a shift in traditional studio design process with assignments that invited diversity while integrating analog and digital making and methodologies. Experiments varied from indigenous technologies...
including smoke firing of clay coil and pinch pots to laser etched hand-made tiles to a carved soapstone workshop with a local indigenous artist. “the hand figures critically in human cognitive, physical and emotional development” (Wilson, p.58). A constructivist theory of education was used in order to support the multi-pedagogical studio approach based on the benefit derived from the experience of learning through discoveries that one makes for oneself… (1) increase in intellectual potency; (2) shift from extrinsic to intrinsic rewards; (3) learning the heuristics of discovering; and (4) aid to memory processing. (Bruner, p.10). Hands-on in-class exercises used a variety of medium such as paper, clay, wood, yarn and stone to support the connection of mind and body (kinesthetic creation). For their individual design term project, each student developed unique interior solutions for the transfer of culture while exposing a diversity of cultural issues such as adaptive reuse, equity, education, homelessness, identity, language, Alzheimer’s, and inclusion. From an established program list ranging from ‘place of arrival’ to ‘place of transformation’ students chose (or created) a maximum of six ‘places’ for a specific culture of choice for development from schematic design through design development. Pre-design research involved case studies of a chosen significant global cultural center with site visits and course readings to support their individual culture of choice. Final submissions included self-directed concept, program and design development for a ‘transfer of culture’ connected to a specified geography and demographic.

REFERENCES

A CASE STUDY of Game Based Learning in Interior Design

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ABSTRACT

Problem
Interior design studios are environments for active learning and experimentation. However, design studios have been generally criticized for shortcomings in their basic pedagogy (Ku, 2016). The purpose of this research is to understand perceptions of interior design students after using game-based learning (GBL) as a pedagogical approach during the process of solving several small-scale design problems in a 16-week long media presentation studio. The study attempted to answer the following research questions: 1. How do interior design students perceive GBL as an approach to address the following issues during the process of solving several small-scale design problems: - Workload distribution - Lack of clear assessment criteria - Deficiencies of the master-apprentice model 2. How do the perceptions of these students confirm general affordances of GBL within interior design studios?

Method
This research used a case study methodology (Creswell, 2007) to study how six undergraduate interior design students use and perceive GBL as a supplemental approach to solve design problems in a studio environment. The students used a GBL approach I designed to navigate the different phases of the design process in several small projects. I observed participants while they were working through the design problems. During the semester, each participant was interviewed individually to reflect upon and clarify his or her experiences during the use of the GBL approach in the design studio. The students were also debriefed in a focus group session to
provide insight on what improvements were needed to enhance the proposed game-based learning studio and how their perceptions confirm general affordances of GBL within interior design studios. Data was collected via multiple sources; observation notes, student reflections, interviews, and a focus group session. The observation notes and weekly student reflections were continuously analyzed to inform the questions asked during the individual interviews. The individual interviews were then transcribed and analyzed to guide the focus group session. Therefore, the method’s structure was open to change and enhancement as the study progressed. I personally transcribed all audio recordings to immerse myself in the data and took notes and memos during transcription. I used attribute coding to help organize the data. I then used structural coding to organize participant responses for each interview question, and relate them to answering the main research questions. This coding method allowed me “to quickly access data that was relevant to a particular analysis from the larger data set” (Namey, Guest, Thairu, & Johnson, 2008). I finally used in vivo coding for interview and focus group transcriptions (Saldaña, 2015). Finally, the data was comprehensively reviewed again using pattern and focused coding to produce categories, themes, and assertions that inform and address the research questions. The results lead to a broad interpretation of the participants’ experiences to illuminate the unique case of game-based learning in interior design studios.

Findings
Findings from the study conclude that game-based learning fits into the iterative and experimental nature of the design process, helps students focus on the design process through trial and error without a great risk, changes the studio’s feedback structure, and allows students to track their progress while having creative freedom. The study also found that implementing GBL within interior design studios requires considering students’ different learning styles or preferences as well as the changing roles of both the instructor and the students. This research provides empirical evidence supporting the existence of instructional issues in traditional design studios, and suggests directions for future research studies in fields of interior design pedagogy, instructional technology, and higher education policy.

REFERENCES


Teaching Taste (and) (Through) Media

Karin Tehve, Pratt Institute

ABSTRACT

When one asks the question "what is the most important qualification for an interior designer", the average person’s answer is (still, often, sadly) "they have to have great taste". When one asks the question "what is taste", the average person’s answer is "it’s what I like". This is clearly not a satisfactory answer for an interior designer, who makes design choices through a complex process involving research, analysis, testing of options and the ability to navigate and satisfy a multitude of preferences, as well as one’s own. Taste, based on scholarship since the 18th century, is a set of intuited preferences or values to which one is conditioned by environment, experience and education. This conditioning is akin to an unconscious learning process, all the more powerful because its reception is not critical; it forms what we think of as natural. It is insupportable however to assume that taste IS nature, an inherited set of proclivities, embedded and unchanging. We all have preferences to which we’ve been conditioned; for designers, a robust design process leads us to test our intuited choices and can offer opportunities to actively question conditioned values; that having been said- as it is an integral part of a designer’s sensibility, an understanding of what taste is and how it forms is critical for any designer. So how to teach students about a set of values that are not explicitly learned? An important player in the development of one’s taste is media. Certainly most of a designer’s familiarity with canonical works of design since the beginning of the twentieth century (whether in the classroom or the atelier) has been through photographs, affording us global access that continues to grow in form and reach. Yet, as Roland Barthes tell us, what we see in a photograph is not its power as a medium but its content or its subject. A source of its power is its relative invisibility. An uncritical consumption of images imprints us with an understanding mediated by its authors and its form. In that way, the act of viewing a photograph is a metaphor for and one site of the
formation of taste. Publications featuring the Case Study Houses (1945-1966) offer a unique opportunity to examine this phenomena. Commissioned by Arts and Architecture Magazine, these projects offered contemporary design luminaries a chance to propose and build prototypical housing models to address post-war housing shortages; it also offered a built-in opportunity to disseminate and promote those projects in a lush image-dense publication. These projects have been extensively documented in other publications up to the present day; each frames the project differently. This presentation would concentrate on comparisons of CSH projects across different publications (with an emphasis on the analysis of photography and layout) produced by graduate Interior Design students from 2011-2016. Teams of students undertake a detailed study of the content, cropping and framing as well as the context (order, adjacencies) of each image and compare that with a close reading of texts- even advertisements are understood to be part of an article’s context. This granular analysis that reveals the point-of-view (a constellation of opinions, attitudes or judgements) embedded in these publications; students are able to identify a range of alternative identities for the house itself, as well as differing definitions of domesticity, privacy and gender roles, readings not easily discernible to a more casual reader. Students leave the class with a greater mastery of the techniques of design representation (and critique) as well as an understanding of its power: that our mediated access TO design transmits a set of embedded values, an understanding critical for both consumers and producers OF design. Analysis illuminates its mechanisms, and offers an analogy to the unconscious conditioning that forms taste.

REFERENCES

Spatial Design and the iPhone: Utilizing students’ cognizance of an everyday technology to investigate and design space

Sheryl Kasak, Pratt Institute

ABSTRACT

The smart phone - really the iPhone - has allowed for the constant presence of video in our daily lives. Capturing information as still or moving images; what format to use: standard rectangular, time lapse, slow mo[tion], video, square or pano[ramic] has become an innate activity; the device determines an objective image boundary. [fig.1] This familiarity with the smart phone as both as both a mediator and conveyor of experience combined with the predication of how we place ourselves within space may allow us to utilize these devices as design tools. Problem Entry level design students lack the ability to recognize and define spatial conditions and then translate and apply them to produce desired design outcomes. Often these students do not understand how to organize and implement geometric and material elements to create new environments. They may however be able to capture the properties of their real-time surroundings utilizing video, and then define and analyze which components are responsible for specific experiential events. Bernard Tschumi opened this conceptual door in 1976 with his Screenplays Scenarios; individual frames of film sequences were spatially diagrammed and abstracted to produce a recognizable architecture based upon the action which had taken place. [fig.2] Teaching Methodology Over a five year period undergraduate interior design and graduate architecture students were asked to create a one minute video documenting a given project sire from an experiential point of view. Students first analyzed films including Galveston and Blade Runner. In the latter, the character Deckard uses an "Espar" machine to effectively navigate a 2d image 3 dimensionally, enabling the viewer to inhabit the photographic space and understand the spatiality and connectivity of
elements within the room through a perceived occupancy including light and reflection. This scene is an important reference in that it allows [students to see] navigation through a filmic image while using calibrated coordinates, reinforcing the importance of data collection as a design tool. The project brief [fig.3] also required attention to scale, spatial relationships and materiality. Traditional editing techniques [i.e., cut, dissolve, fade] were studied as a means of transitioning through and understanding of fore, middle and background. The assignment aimed to provoke the use of video as a design tool allowing students to visualize space as a transformative volume, to better understand sound as a design component, and to guide the viewer/occupant to a specific area of a frame or scene through descriptive information. Upon completing their own film, students identify systems and sensory relationships. This information was translated first to a 2d visual language, a map, [fig.4] inferring dynamism and spatiality, then to a 3d construct, and finally developed as a programmed and occupiable space. Analysis of Outcomes After teaching and developing the assignment for five years, a survey instrument [fig.5] was issued to a student population of 169. All 39 responses demonstrated the efficacy of film as a teaching tool. Student comments indicated an appreciation for a different and holistic way of thinking about space including a heightened awareness of changing movement, light, time and sound which enabled them to better understand, conceptualize and design with intention. The few negative responses included the time consuming nature of editing and limited technical ability constraining satisfying results. Film and video are relevant tools for students as they formulate their ideas about space. The immersive qualities allow for investigation of the experiential and dissuade the representational. Introducing this medium expands the discipline culturally and results are progressive, at times unconventional, but speak to a vital relationship between the phenomenological and spatial when designing the built environment.

REFERENCES

Lewis, Mark. Galveston, 4K to 2K digital film. USA, 2017 using film to rediscover the known by changing the point of view[er] and image speed.


Scott, Ridley. Blade Runner, The Ladd Company, USA, 1982 looking at the digital navigation of a still photo to investigate space


Screenplays Scénarios, 1976-1978 looking at diagramming and abstracting the space of the film fra
NOT YOUR FATHER’S CHARRETTE: USING VIDEO AS A DESIGN TOOL

David Brothers, New Jersey Institute of Technology

ABSTRACT

This abstract explains how video has been introduced as a supplementary medium for design investigation and communication in the upper level studios of an Interior Design program. Despite the wholesale adoption of digital technologies for design of the built environment in both the academic and professional realms of interior design, its use has been primarily concentrated in leveraging the advanced capabilities of three-dimensional, parametric, and building information modeling for output that still relies heavily on two-dimensional representation. Students are obligated to present their work as either static ‘boards’ pinned to walls or as linearly sequenced images collated in slideshows and limit their use of motion-based media to 3D walkthroughs. Rarely is the use of video utilized as a design tool in advance of the development of a student project or as the medium of investigation, progress, and presentation itself. Not only are today’s students’ consumers of video content through a multitude of platforms but the ubiquity of personal digital devices with embedded video sensors have also enabled them to become producers with the means to distribute content through social media and video platforms such as YouTube, Vine, Vimeo, and others. The inclusion of these newly democratized technologies in the classroom bolsters students’ enthusiasm and engagement with the curriculum (KABADAYI 2012) (KRUESMANN 2014). In a final fourth-year studio, students were asked to use video production in three different ways to develop their projects throughout the semester: as a vehicle for creative exploration and development; as a research presentation tool; and as a device for conceptual expression. The semester-long project focused on the study of culinary arts as an analogue for thinking about interior design and culminated in the design of a culinary school and
restaurant facility. Students were first asked to study a specific aspect of gastronomic culture and to create an interpretive video of a recipe that represented the essential characteristics and qualities of their category (Fig. 1). They were required to record and animate the process of creating the dish in a manner that was deliberately metaphorical and ‘experiential’ which is best studied, represented, and discussed within the context of time based mediums (CHARITOS, ET AL, 2001). They were later required to present their building, site, and program research in a short, clearly organized video compilation that included interviews, site studies, building analysis, program, and adjacency diagrams (Fig. 2). Typically, this is done in a digitally sequenced series of slides that students will orally present, so the challenge of relying on a temporal visual medium alone to create a coherent and self-explanatory narrative of their findings required discipline and creativity to distill the essence of complex and potentially ever expanding content. Lastly, students were obliged to produce a conceptual representation of their final design using an animated GIF format (Fig. 3). This required students to consider how experiences of three-dimensional space are never static and embody movement and multiple perspectives. Video is uniquely positioned to explore this temporal aspect of interior design. Learning outcomes demonstrated that student projects were enhanced by the exploration and representation of their designs using video especially when the richness and immediacy of their work resembles the mediums they are familiar with and routinely experience outside the academic environment (Figs. 4&5). As video technologies and time-based media tools such as motion-capture and virtual reality become ever more accessible and affordable, it is inevitable that these will disrupt the current paradigm of design pedagogy. Continued experimentation and analysis of the use of video production in the studio will leverage these ubiquitous technologies with increased sophistication and self-awarenes

REFERENCES

KABADAYI, L (2012) The Role of Short Film in Education, Procedia - Social and Behavioral Sciences, Volume 47, Pages 316-320
Teaching the Spatio-temporality of the Human Body: A Cross-disciplinary Design Exploration

Jain Kwon, University of Georgia

ABSTRACT

The human experience is bound to the body. Space is experienced and becomes meaningful only when the lived body is present in the context of the space. This study discusses how the relationship between body, space, and time was explored through cross-disciplinary studio practice that involved dance and music. Background This study is based on the phenomenological notion of embodiment involving body, space, and time. Embodiment refers to the tangible or visible form of perceived concept and meaning (Attfield, 2000), providing an explanation for the way through which mundane life is incorporated into the body and becomes naturalized in the form of space. An embodied space is a series of places imbued with one’s own memories, imaginations, and dreams, which are accumulated through the personal, physical, and collective experience of the space (Cresswell, 2004). Spatial experience is contextual, relational, and subjective. Merleau-Ponty (1945/2012) suggested that bodily movements, not mere shifts in location, within the space is the “foundation of [one’s] senses” (p. 243). The body itself is a form of expression that is simultaneously constituted with thought; like connotative language, it is “a general system of symbols” that does not presuppose but accomplishes thought (p. 244). In this regard, gesture and movement are means of communication between individuals that must be interpreted and/or explained. Harvey (1989) argued that “the material practices from which our concepts of space and time flow are as varied as the range of individual and collective experiences” (p. 211). Due to the subjectivity of space, time, and the human experience, design approaches cannot be universal. In this regard, this study outlines a set of studio activities that may help students understand the spatiotemporality of the human body and the phenomenological
meanings of movement in space and time. Procedures The studio practice consists of three projects: 1) To understand the sense of expansion and compression of space, students create transformable compositions that incorporate implied forms and incidental space (Figure 1). An additional benefit of this project is that students learn the relationship between two-dimensional plan drawings and reified, three-dimensional spaces. 2) Students design still, confined compositions that portray a sense of time and movement (Figure 2). Throughout this project, students fully rely on their conceptual interpretation and do not use any photo images that might distract them from the exploration of essential meaning. 3) Through this cross-disciplinary project, which involves students from the dance department, interior design students are encouraged to consider how human bodies can configure or define space, create a sense of territory, and communicate with the surroundings. First, the interior design students observe the dancers perform to music (Figure 3), seeking a sense volume and scale, and identify the interactions between the human body and the intangible attributes of the music and the space. Following their observations, the interior design students become constituents of the performance by interacting with the dancers; responding to the music; and expressing their interpretations of the dialogue created through positioning, postures, and gestures. Based on all their observations, actions, and interpretations, the students design experiential settings that portray the meaning of movement in the lived space. The details of the process and the project outcomes will be presented at the conference. Conclusion It is essential, yet challenging for interior design educators to bridge the gap between studio practice and the theoretical and philosophical aspects of environmental design. This study demonstrates the importance of rigorous effort toward the establishment of evidence-based design pedagogy, which is in line with the evidence-based approaches valued in design research and practice.

REFERENCES

Visual Communication: Pedagogical Advancements Through a Flipped Classroom Method

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ABSTRACT

The ever-present role of the interior designer is changing dramatically due to advancements in technology and software. Interior designers and students use powerful technology and software packages in innovative ways to augment workflows to obtain dynamic and sophisticated outputs. Technology driven processes are becoming more evident in both the academy and the profession. Therefore, it is increasingly important that students understand an analog/digital workflow and are introduced to innovative communication methods that are advancing interior design curriculum and praxis. The objective of this paper is to critically examine the current discourse of flipped classrooms and introduce a pedagogical framework that capitalizes on a flipped classroom model to teach visual communications (e.g., drawing, diagramming, rendering). The primary case study is a sequence three communication courses that have recently undergone a curriculum overhaul. Three years of data (statistics from questionnaires, charts showing procedural advancements, course surveys, and non-subjective assessment methods) will be presented to further the thesis. The three classes were previously taught in a typical computer lab with three sections of 35 students and were formatted to deliver content as through it was a step-by-step tutorial. The new pedagogical framework collapsed three sections into one with 100+ students and took the communications courses out of the computer lab and into a lecture hall. My contention is that the only way this model is successful is by using a flipped classroom method and re-organizing the course learning objectives. Since it’s inefficient for faculty to use valuable subject matter class time to teach the required design software, students are asked to learn software on their own time and allow the class to be used for higher level principles. However,
students are often overwhelmed when seeking information, due to the abundance of online resources like lynda.com and YouTube that are not focused enough or directed to the application within interior design. The problem is that students spend a considerable amount of time searching for information rather than applying the knowledge gained and furthering their understanding of communications. The proposed flipped classroom model looks to alleviate some of these issues by providing online and printed modules that are specifically aimed at interior design education and the application of technology/software. These modules are not necessarily software specific; rather they introduce students to a cross-platform workflow that moves seamlessly between two-dimensions and three-dimensions. In doing so, students learn the associated procedural language required to analyze, critique, and integrate industry standard technology, software, and operations into their workflow. By repeating and scaffolding the use of technology throughout interior design curriculum we afford students the best opportunity to carry this important set of skills into their school work and their careers beyond. In doing so, students cognitively engage with the content and absorb a greater volume of information. The flipped classroom model has helped to promote meditative thinkers that understand how to seek technology and use it as a vehicle for intellectual growth and has largely improved students communications through drawings that provide not only breadth but depth.

REFERENCES

Community Collaboration: A Teen Hub

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Joan Giroux, Columbia College Chicago

ABSTRACT

“Community driven design…has been at the forefront of many designers’ practices and on university campuses” (Hicks and Radke). One challenge many educators face is developing reciprocal relationships, and projects, that benefit students and community. Adding to the challenge, projects must be shaped to fit into the academic timeline, and in many cases with little financial backing. This presentation examines a community driven project completed by students in an upper level design studio in spring 2017. Over semester, a cast of characters from within and outside the institution contributed to the development and public presentation of ten distinct proposals for a space for after-school programming for teens in an urban setting. This community engagement studio presented a unique opportunity for juniors and seniors to connect with multiple stakeholders in a human-centered design process aimed at providing solutions to a design problem identified by the community. Internal contributors included staff, students, and faculty from diverse disciplines such as technical writing, journalism, graphic design, business and arts management, while community participants included area youth and cultural organizations, as well as local civic servants. Students responded to the expressed need for space and programming for neighborhood teens in a community that already included a variety of options for younger children and seniors. Applying IDEO’s human-centered design strategies, faculty led students through a series of exercises in the classroom and in concert with community partners to hone in on possible adaptive reuse solutions in an existing recreation facility. Students prepared case studies, conducted site visits, planned and ran focus groups with multiple stakeholders, and researched place type, including visits to area precedents. From the outset, the value of creating and nurturing reciprocal relationships was introduced and modeled as a key
strategy. Students were expected to address aspects of the human relationships and client/community partner needs as reflectively and carefully as they would make choices regarding surface, color and texture for FF+E. As a designer and artist team, the faculty came from diverse experiences in creative practice and education. As the faculty modeled mutual respect and congenial collaboration in class sessions, students directly observed the benefits of multiple perspectives and viewpoints in framing questions and interrogating possible solutions. While students had access to adequate facilities (computer labs, software, materials samples, libraries, design and fabrication studios) to research and develop designs and create models, an additional layer of interaction necessitated resources that were not present. Just as various stakeholders’ voices were critical in the research and development phase of proposing design solutions, the HCD feedback loop required that the students present their proposed solutions to receive stakeholder response. A community feedback event was planned to gather responses from residents, including teens who participated in the initial focus groups. Students were asked to consider not only their individual design proposals, but how the design of the exhibition itself could foster interaction and commentary from a variety of stakeholders. Absent institutional funding, the two faculty self-financed this external presentation of their students’ work to the community.

REFERENCES

Hicks, Travis, and Rebekah Radke. “Reshaping the Boundaries of Community Engagement in Design Education: Global and Local Explorations.” Journal of Higher Education Outreach and Engagement, vol. 19, no
Moving Past Instructor Based Feedback: Using Metacognitive Reflection in the Design Studio

Lisa Phillips, Philadelphia University

ABSTRACT

Framework

It is widely accepted that excellent design relies on many principles that are universal: balance, rhythm, and proportion, for example, are just a few of the elements in this category. There are other, more elusive factors, however, that are also considered when determining if a design is successful. Many of these are more subjective than objective, more qualitative than quantitative, meaning that effort alone does not guarantee a positive end result. Young designers can often find this unique academic environment challenging, particularly if they are looking to sharpen their skill set. Instructors usually provide some form of feedback to students throughout the term. However, after years of finding rubrics and hand written feedback left behind unread, one can be left to wonder if the feedback instructors provide for students is enough. Is it clear enough, meaningful enough and specific enough to the individual to warrant becoming a goal a student will set for themselves in the future? Creative environments have been shown to be successful in achieving student learning through the encouragement and development of metacognitive abilities.1 “Teaching designers to explore their own cognitive processes in a systematic manner helps them manage their own creative thought processes and develops their metacognitive knowledge. This (information) provides designers with the (understanding) of when, where and why to use specific thinking strategies or cognitive approaches”.2 Rather than solely providing feedback, a design instructor can instead work with students to hone metacognitive skills, assisting them to become more self-aware of the areas they need to develop and supporting them in creating a plan to improve on their own. Research has shown that “higher levels of reflection,
such as critical reflection and critical thinking, are essential to facilitate metacognitive processes in problem solving through the review of the appropriateness of strategies, and monitoring and control of these strategies and processes. This level of monitoring and regulation in critical reflection is dependent upon self-knowledge and self-awareness.”

Methodology

In 2017 a group of fourteen senior, interior design students participated in a semester long metacognitive study in their design studio. During the first week of the semester the students received a “Design Success Checklist” (recently published in “It Works for Me, Metacognitively”) that noted the instructor’s personal observations of successful behaviors and procedural methodologies of previous design students. After this list was handed out, an initial reflection was completed by each student, asking them to identify areas they felt they excelled in and those they needed to work on in the future. A goal for the semester was established by each student in this manner, inspired by either the checklist, or past semesters’ obstacles. It is of note that a majority of the students' goals were not inspired by the instructor's checklist, however, but rather they were developed independently. Approximately four times throughout the semester, students were provided with a follow up reflection, asking them to consider their progress on their self-imposed goal. The majority of the students who participated were able to make significant progress towards their goals over the course of the 15 week term, with the assistance of the monthly check-in. This was in stark contrast to previous semesters, where goals were set in the beginning of the semester but no intermittent metacognitive reflection took place throughout the term. Based on student feedback at the end of the semester, this method of cognitive reflection created a feeling of student empowerment overall and led to significant gains in the studio.

REFERENCES

Demonstrating an Understanding of Lighting Design Theory Through a Multimodal Experiential Learning Project

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ABSTRACT

Problem:
Quality lighting design is important to the health, safety, and wellbeing of people and the environment. It is important designers understand how daylight, luminaries, control systems, and electric sources effect people and the built environment and contribute to a quality lighting environment. (Winchip, 2017) Applying the principles and theories of lighting effectively is often intimidating for interior design students. Inspiring students to learn and understand the art and science driving lighting principles, theories, and systems can be a daunting challenge for design educators. The more diverse means to learn and experience something, reinforces the memory and understanding of it. (Moreno, 2007) Assigning projects which provide real world experiences afford students the opportunity to apply otherwise abstract concepts and theories, further solidifying their understanding. (Ambrose, 2010) To help foster a supportive learning experience for the students in which they could apply lighting theory, a project was developed centered on the real world experience.

Methods: Reaching out to our local community, we approached a business owner who was in the midst of renovating his establishment which is located in the historic part of town near campus and a place where students frequent. Because the business (coffee shop/ wine bar) is open early in the morning to late in the evening and caters to a variety of patrons, the project presented many lighting design challenges. The students explored lighting attributes such as contrast, glare,
layering, color rendering, and lighting illuminance levels then applied lighting theory to create a
design supportive of the intended use. Alternative learning spaces and interaction with other
people create a rich environment to understanding the spatial ecology. (Beard, 2006) Through
multi-modal experiential learning framework, the interior design students conducted interviews,
surveys and audits of existing conditions, and researched considerations for this historic redesign
such as building codes, color theory, materials specifications, feasibility and budgets as they
applied to lighting design. They gained valuable information through various activities to include:
field trips to lighting showrooms, experimentation with lighting controls, texture application, and
grazing in lighting and materials labs. Consultation with lighting professionals and vendors
throughout the process informed the design development of the project and helped students build
collaborative relationships fostering the sharing of information and ideas. Students presented their
preliminary designs to the client and his staff for input then developed final project submissions.

Outcomes: Upon completion of this study, student surveys indicated pronounced satisfaction with
the project and while challenging, the experience provided the positive reinforcement and
confidence to apply lighting principles and strategies in future design projects. Each student’s
work demonstrated evidence of their understanding of the course content and material. In
comparison with previously taught courses, student exam scores improved as did the quality and
depth of their work. Since the experience, the owner has contracted a local architect and plans to
implement some of the design considerations. Future Implications: For further studies we will
seek other service learning opportunities engaging our students and community and conduct a
longitudinal study to measure the effects of multimodal learning processes. Hopefully, the
students who participated in this project respect the importance of collaboration from all project
stakeholders and will seek involvement in their future careers.

REFERENCES
Ambrose, S. (2010). How learning works: Seven research-based principles for smart teaching (1st
83-87.
educators and trainers (2nd ed.). London ; Philadelphia: Kogan Page., p. 110.
From STEM to STEAM: An interior design studio as a means for cross-campus interdisciplinary collaboration

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ABSTRACT

Purpose:
The necessity for effective interdisciplinary collaboration has increased globally. To successfully achieve this in professional practice, interior design students must learn to work efficiently on diverse teams and coalesce divergent thinking into impactful solutions. Moving from STEM to STEAM incorporates art and creativity into science, technology, engineering and mathematics. This study examined the process and outcomes of a cross-campus interdisciplinary collaboration between interior design students and faculty, staff and students across campus. Empathy and Design Thinking (DT) played a vital role in the process, enabling interior design students to better understand the unique experience of their team members and intimately understand their various programmatic needs facilitated through innovative learning and teaching methods (Kouprie & Sleewijk, 2009). Skills acquired in this model included: pre-design research, stakeholder engagement, DT process with research, programmatic analysis, observation, conceptual development and visual and verbal presentation skills. The purpose of this project was to enable interior design students the opportunity to create impactful, STEAM-inspired learning spaces and to foster multi-disciplinary collaboration through the use of human-centered design methods.

Problem Being Addressed:
Faculty were faced with two problems: (1) How can do interior design students gain an in-depth understanding of the complex needs of the target users to design impactful learning spaces? (2)
How do interior design educators learn from precedents in private industry to translate established human-centered design methods from professional practice into a design curriculum? Method: The College of Liberal Arts and Sciences at a U.S. Top 10 public university has been tasked with transforming the campus landscape into state-of-the-art, technology-integrated, STEAM-focused spaces for departments including Psychology, Biology and Mathematics. A mixed methods approach utilized human-centered, DT methods including narrative inquiry (Portillo, 2000), group interviews, analogous inspiration (IDEO) and industry-based exercises. Design thinking is a term that describes a creative brainstorming process that is human-centered, empathetic and focused around the people at the center of a problem to be solved (Brown, 2008) and has proven impactful across disciplines (Orthel, 2015). The method first focuses on clearly identifying a problem in order to gain deeper understanding and ultimately arrive at a more holistic solution (Carmel-Gilfilin, 2015). The faculty team incorporated DT exercises from IDEO’s design kit and narrative inquiry to research end-user groups in depth; optimize performance for students across ability levels, foster creativity through design thinking workshops and charrettes, and evaluate ideas using criteria focused on analyzing the learning process.

Analysis of Outcomes:
Overall, students and faculty reported positive feedback from the experience. Students felt that the design thinking exercises enabled better understanding of the needs and desires of their client and improved teamwork. Further, faculty and staff responded positively to the collaboration and engagement with the interior design students. Narrative inquiry, online surveys and design thinking was used both as a teaching tool during the design process and also as a method of analysis at the end of the exercise to understand perceptions of the efficacy of the design thinking methods from students, faculty and staff. The student work and the strength of their creative solutions were assessed in two ways: (1) Students presented their work to client, and reactions were recorded via observation and video, (2) Student work was reviewed by client without any students present. Design thinking STEAM strategies were valuable tools that facilitated successful teaching and learning during this process and will be shared.

REFERENCES


Connecting Meaning and Form: Using Popular Iconic Imagery for Creative Applications

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ABSTRACT

The university academy continues to advocate for social tolerance and inclusivity in the wake of populist movements that call into question the relative value of people of unfamiliar cultures. Throughout history, this has been a recurring challenge. Historians have shown that the chronicling of events over time is influenced by public memory, the prevailing social context in which people filtered their perception and understanding of the events. A historical framework was applied to a freshman design curriculum to develop foundation skills that examine the meaning of a designer’s responsibilities as advocates and change agents. The beginning design student is exposed to a human-centered design process that fosters values of human respect and dignity for individuals regardless of their country of origin. This paper focuses on the first phase of a freshmen level year-long thematic pedagogy of a Bachelor of Science in Interior Design. Tensions are created through both visual design and conceptual approaches in the context of a historical paradox. The stage production of Hamilton: An American Musical provides the vehicle for this paradox. The domestic and cultural diversity issues of early America are contrasted with parallel issues of immigration faced today. The oscillation between past and present recurring themes serves as a safe zone for students in which they identify and explore social inequalities. This new understanding of social reality is then translated into two-dimensional compositions. A baseline indicator of student perception and understanding of current events with respect to global immigration issues was established at the beginning of the assignment. The two-dimensional
design project began with a critical thinking exercise that posed key questions regarding attributes of a hero which the student explained in table 1. Selecting one of four defined characters in Hamilton, students were required: to explain who he was and what he did to be considered heroic; and to explain why in an open rebellion against the military might of the British Empire, he was an unlikely character to go down in history as an important American figure. In Table 2 students explained the use of design language to graphically communicate their answers to the questions. This process of critical thinking identified the major considerations for developing designs that conveyed a social message which was subsequently employed to explore relationships between meaning and form. Students initially developed three two-dimensional compositions to visually represent the information conveyed in Tables 1 and 2. In a manner representative of M.C. Escher’s approach to manipulating reality, visual tension was established through contrast. Tessellated two-dimensional stylized figures were used in combination with the three-dimensional rendering of objects from reality to develop the compositions. Each final composition contained at least two of the following: an image of a scene from eighteenth century America, an image from the Hamilton, and/or an image of an object from eighteenth century America. Relationships between positive and negative space, dominant and subordinate elements, and formal and informal balance were manipulated in the compositions. The compositions visually tell a story about the poor fit between expectations of the historical time and the reality of who performed heroic acts to win the American Revolution. Through the process of critical and creative thinking, students effectively applied the elements and principles of design to demonstrate understanding of history and the historical narrative. This understanding was constructed in the context of community, broader politics, and social dynamics. The beginning design student’s ability to identify and graphically communicate historical paradoxes is an initial step in examining the meaning of a designer’s responsibilities as advocates and change agents.

REFERENCES


Redefining Retail Design: A Collaborative Approach to Millennial-Centric Solutions

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ABSTRACT

Context
For years, retail professionals have discussed the industry’s struggle to personally connect with Millennials, failing to capture their desires and ethics, which drive brand loyalty and emotional bonds (Davies, 2015). Research shows Millennials believe people and corporations should work towards a more environmentally and socially conscious world (Makhija-Chimnani, 2014). 78% would recommend a company they believe is a good citizen and 71% would be loyal to that business (MLS Group, 2014). However, few of these principles exist in retail practice or education today, hence the continued disconnect. While pedagogies utilizing brand-specific, competition-based studios create real-world experiences (Davies and Black 2016), positioning a specific retailer’s objectives at the forefront still may not align with Millennials ethics. This presentation delivers a newly developed, advanced design studio that placed Millennials desires, our current design students, at the center of the retail solution.

Method
Using a participatory design process, the studio structure, guided by the professor’s experience in retail brand strategy, mimicked a multidisciplinary retail agency by creating teams of Interior, Industrial, and Visual Communication design students to develop Millennial-centric solutions. The project prompt was developed after discussions with students, identifying their personal concerns with the retail industry and ethics driving their retail behaviors. Inspired by presentations on generous brands, ones that take action for environmental and social change
(Davies, 2015), students developed brand experience case studies, assessing the customer journey, store’s purpose, and alignment with their discussed ethics and desires. Collaborative teams then selected an online-only generous brand that embodies their beliefs, designing a physical experience that realized their vision for retail’s future. Weekly meetings with designers and research strategists from four influential retail agencies provided students with collaborative ideation, interactive workshops, and project feedback. One firm hosted a gallery-style mid-term review, where students presented two concepts for their retailer, providing students with design direction and professionals with exposure to Millennials perspectives. Final design proposals were presented in an open reception with representation from seven local agencies. A multidisciplinary jury of practitioners and VMSD Magazine editors, who sponsored the studio and documented the process for magazine articles, awarded the most innovative project with the opportunity to present during the 2017 International Retail Design Conference (IRDC).

Concluding the studio, a third party from the University conducted focus groups, gathering students’ and professionals’ responses to the studio’s process and outcomes. Impact Collaboration with local retail design agencies created meaningful impact on both students and professionals, while VMSD’s support provided a platform for Millennials views to reach a broader audience. Professionals said they were challenged by the project prompt and gained valuable insights from Millennials. Students took this course specifically to engage with professionals and “freely express what they desire for their future” regarding retail culture. One student said: “I’ve struggled to find an emotional engagement in my projects, this studio was the perfect opportunity to practice serving a purpose more than just crafting another product.” Another wanted to “neutralize the evil in retail,” meaning retail should be about “more than just selling another shirt I don’t need, but...make a positive impact on the world.” A winning team member said, “Before this studio and IRDC, I had a misconception about what retail design was about. I thought retail was very profit-driven and projects had no lasting impact on people. I now see the potential retail has to align with my beliefs.”

REFERENCES


Teaching diversity on campus: reflections on a collaborative interior design studio

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ABSTRACT

BACKGROUND
In an increasingly globalized market, interior design schools are expected to provide students exposure to different cultures and equip them with an understanding of diverse social and cultural contexts. The Council for Interior Design Accreditation (CIDA) 2017 Professional Standard 4 also cites knowledge acquisition regarding the global context as a required skill for design students, and encourages exposure to diversity for better-prepared professionals (CIDA, 2016). While study abroad programs are valued as an opportunity to develop awareness and sensitivity to global context (Hadjiyanni, 2013), these programs are not required in interior design curricula, and not every student has the resources to participate in them. Thus, it is vital for interior design programs to incorporate these objectives into their curricula in a more inclusive way.

STUDY OBJECTIVES
This study reports the process and outcomes of a junior-level studio taught in Fall 2017 in a CIDA-accredited Interior Design program. The design studio adopted an experiential pedagogical framework, collaborated with a university-based student housing services committee, and undertook a global living-learning community project. The main design objective was to create a facility that would support living and interacting with people from diverse cultures. An industry partner of the interior design program also sponsored the studio. While focusing on the needs of a diverse international and domestic student populations was the primary intent of this studio, the adopted pedagogical approach also provided the students an opportunity to work on a real-life
project, and apply their design knowledge and skills to develop conceptual design proposals for a real client/community partner. A detailed background research on user groups and site, including a site visit and client interviews preceded the conceptual and schematic design processes. The collaborative studio was taught with continuous involvement of the community and industry partners in the design and assessment processes, with their participations in project introduction, site visit, interim and final reviews.

METHOD This study presents a detailed examination of the processes and products, by incorporating student, faculty and community perspectives. The data collection methods include an online survey of students on the process and their perceptions on the studio’s impact on their understanding of diversity (n=27), an interview with the steering committee member regarding the benefits of this partnership, analysis of student projects, and faculty reflections to the process and final projects.

OUTCOMES AND IMPLICATIONS
This case study discusses the perceived benefits and barriers with respect to student learning on global contexts and diverse populations, as well as community outcomes of this collaborative studio. The findings are in line with the previous research with respect to the benefits of such projects, such as increased awareness of cultural awareness, as well as expected barriers in relation to project scheduling within an academic calendar (Zollinger, et al, 2009), and addressing the priorities and expectations of all the involved stakeholders. The community partner underscored the usefulness of student projects for vision development and in their interactions with architects and design professionals, supporting the community capacity building power of such projects. During the presentation, the authors will also share student projects, and the lessons learned that may help other educators who would like to teach about diversity on campus, rather than through cultural immersion abroad.

REFERENCES
Contemplative Practices in the Interior Design Studio Classroom

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ABSTRACT

The purpose of this study was to assess the value of contemplative pedagogy and the impact of incorporating contemplative practices into the interior design studio class. Mindfulness based practices have grown in popularity as a means of increasing focus, cultivating creativity and empathy, and otherwise mitigating the distractions of modern life through improved concentration and reduced stress. (Baas, Nevicka, & Velden, 2014; Brown & Ryan, 2003; Byrnes & Bassarear, 2015; Grey, 2012; Rogers, 2013; Sarath, 2003). Studies have shown that practices like meditation have the ability to alter how our brains process information, leveraging this neuroplasticity for beneficial outcomes such as a reduction of top-down thinking (Siegel, 200). The literature on contemplative science, in and out of the higher education context, reveals that there much to be gained for the interior design student who engages in a mindful practice. Harvard psychologist, Ellen Langer (2014, 2016), contends that mindfulness encourages “three characteristics: the continuous creation of new categories; openness to new information; and an implicit awareness of more than one perspective” (2016, p. 4). These skills along with other mindful traits, including “openness to novelty; alertness to distinction; sensitivity to different contexts;” (2016, p. 22) among others, may prove valuable to an interior design student who is engaging with complex stakeholders, everyday distraction, as well as seeking creative solutions to design problems. Characteristics such as openness can cultivate empathy and reduce top-down mindless thinking, helping students to see design problems in new ways, and be more critical of their surroundings by reducing assumptions. To test these ideas, students in an upper level, undergraduate studio were led through a series of contemplative practices including journaling, beholding, mindful drawing, as well as meditation throughout the semester (see “Tree of
Contemplative Practices” in Barbezat, 2014, p. 10). To reinforce their familiarity and apply these concepts spatially, the students designed a hypothetical in-patient hospice care facility with areas for patients, family, and caretakers to engage with various contemplative practices. The first phase of the project required that students research various forms of contemplative practices to which they were personally drawn. The class also visited and was led in meditation at the New York Zen Center for Contemplative Care, learned about bearing witness from filmmaker and professor John Bruce (2016), and visited the Rubin Museum for a cultural understanding of some of the origins of meditation practice. At midterm and the end of the semester, students were surveyed on their relationship and knowledge about contemplative practices, and to reflect on any changes in their lives in and out of the studio class. It was the hope that by engaging with these practices through research, in-class exercises, and design, that the students would find a positive application to their academic and personal lives. The surveys revealed a positive correlation between the students’ engagement with contemplative practices and their studio work, including a perceived reduction in stress, increased deepening of engagement with the projects, and increased empathy for the stakeholders. While not conclusive, since the surveys may also reflect the fact that more attention was paid to the wellbeing of the students in general, it is worth noting that 100% of respondents would like more opportunity to practice meditation and mindfulness in school including in studio classes as well as in designated locations on campus. The presentation of this information will include a discussion of the contemplative practices employed, relevant literature from the meta-analysis of contemplative practices in higher education, an overview of the project brief and syllabus, as well as examples of student work.

REFERENCES

Pedagogy | Scholarship of Teaching & Learning | Presentation

Drawing as Experience: Integrating Experience Through Drawing

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ABSTRACT

American philosopher John Dewey described life as inherently disorganized, and observed that our cognitive coping mechanism involved the compartmentalization of different aspects of our life. While effective for establishing order in a disorganized world, the consequence of this strategy is dis-junction. Dewey describes it saying, “Compartmentalization brings about a separation of that mode of activity, called “practice” from insight, of imagination from executive doing, of significant propose from work, of emotion from thought and doing.” (1)

Phenomenologist and educator, Rachel McCann expands on this description noting that we “distance ourselves from experience” and this poses a significant problem for design professionals who are tasked with integrative, creative design. (2) Design education attempts to provide students with tools that will allow them to work creatively. In the project “Drawing from Experience,” an elective course taught to a mixed class of graduate and undergraduate students, we attempt to re-establish the connection between designer and experience. The project asks students to choose a place for its emotional, intellectual or aesthetic impact, and document their impressions verbally and through photography. Students then engage in a process of controlled observational drawing and media experimentation designed to cause them to re-frame their relationship to the environment. It is important to note that the focus of the exercise is not to learn conventional abstractions of space, light, and material, but on the student’s examined experience.

The final product of the exercise is a rendered illustration of the observed site that embodies the sense of place experienced by the students. This involves students exploring the conjunction of their subjective experience and the sensed world of space, form and materials, through a careful
graphic translation. The media and image are acting as a catalyst for new understandings. Jodi Forlizzi in her explanation of Dewey’s thought, calls this “heightened vitality.” Further, it is the “disruptive” aspect of the interaction between the direct experience of the world and the system of understandings that the student brings to the exercise that induces growth. (3) The new, deeper understanding of how the physical world interacts with individuals to produce experience, are then applied to subsequent projects. The final project in the course redirects the attention from observational discovery to design; asking the student to apply the composition and rendering skills from earlier projects in a design illustration. Students who participated in this exercise exhibited increased ability to use design communication media and construct compelling graphic narratives. More important, however, was their heightened sensitivity to the role materials, light, and the observer themselves play in the subjective experience of place.

REFERENCES

Creative Project: Re-Use Inspired Luminaire

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ABSTRACT

Creative Lighting Project is a short-term group project aimed at providing a creative approach and application methodology in teaching the principles of lighting design. This project is given in the middle of semester after students have learned lighting design basics and have completed several lighting observation and analysis exercises. Students are asked to produce a completed and functioning light fixture that is at minimum made up of 50% of recycled material and is appropriate for the chosen theme/ project/ client (varied throughout the semesters). Additionally, students have to deliver a marketing brochure that includes an advertisement and specification pages for the constructed lighting fixture. The project is concluded with presentations where students “sell” their fixtures through verbal and visual demonstrations. Presentation settings vary from a classroom with invited lighting designers to lighting design showrooms, emphasizing on the real world aspect of the final deliveries. Project objectives: 1. To exercise creativity through inspired re-use based on the principles of adhocism, a term coined by the architectural critic Charles Jencks in 1968, denoting a principle of doing things ad hoc, using materials at hand to solve real problems. As a method of creation, adhocism starts with everyday improvisations using available materials to fulfill human purposes immediately by cutting through the delays of a large company production process. “It declares that problems are not necessarily solved in a genius’s “eureka!” moment but by trial and error, adjustment and readjustment.” (Jencks and Silver, 2013) This assignment aims at discovery through renewal by re-considering existing objects around us or their parts and synthesizing them in new ways. 2. To visualize a lighting fixture as a product of the lighting effect desired by applying knowledge of the light texture, color, rendering capabilities, diffusion, optical control, etc. (Russell, 2013) Instead of a traditional lecture/ exam
style of teaching lighting principles, students are given an opportunity to experiment, make educated decisions, and deliver a functional product. 3. To exercise sustainable design principles by introducing ideas of repurposing, reusing, and upcycling existing parts. At minimum, 50% of the lighting fixture has to consist of recycled material, giving existing objects a "new life". 4. To motivate students to learn lighting principles and their application in design. Traditionally considered a very technical design specialty, lighting is one of the most powerful tools for interior designers. This project promotes student engagement through active learning by involving fun, visual and social activities. The project is well received by students and makes a technical Lighting Design course highly anticipated.

REFERENCES

Russell, Sage. The architecture of light: architectural lighting design concepts and techniques: a textbook of procedures and practices for the architect, interior designer and lighting designer. Co
Harnessing the Universal Design Principles to Support Cerebral Palsy Care in Residential Housing

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ABSTRACT

Cerebral Palsy (CP) is a birth-related disorder which affects the brain and nervous system. It is the most common physical disability observed in children (Novak, Hines, Goldsmith & Barclay, 2012). Nerve damage caused by this malady has the ability to significantly limit a child’s motor skills, as well as constrain a child’s posture and capacity to walk (among other physical limitations). Impaired cognitive ability as well as epilepsy are also associated with this disorder, which affects seventeen million people worldwide (Novak, Hines, Goldsmith & Barclay, 2012). CP is a lifelong disability which may increase in severity with age, therefore rehabilitation and orthopedic management are mandatory activities for these patients, resulting in an estimated lifetime cost of care at almost $1 million. Given these figures and data, it is decisively important for interior design scholars to comprehend the disorder that is CP, the methods for effective residential planning for those afflicted who are living in single-family homes, and the environmental factors which also affect others living in the home, many of whom are parents and guardians who serve as primary caregivers for the patient. While the need to integrate supportive design methods into residential housing for those with CP and their families is unmistakable, a limited number of related studies for this assimilation have been previously evaluated (DeMerchant & Beamish, 1995; Mace, 1998; Trachtman et al, 2000). In this case, the pedagogical goal of exposing interior design students to the importance of empathizing with those afflicted with CP as well as their caregivers was essential; therefore a junior-level undergraduate studio course was solicited to design a custom home to meet the unique needs of a 17 year old boy, afflicted with CP, as well as the other members of his family who serve as his primary
caregivers. Students met with the family in an effort to conduct a thorough needs analysis, and subsequently commenced upon thorough inquiry to examine the physical limitations that CP presented to this child as well as the particular daily living needs of his 17 year old twin sister, his father and his stepmother. As the detailed requirements of the project emerged, the students proposed that a mapping of the Universal Design principles to the specific symptoms relayed by the client as well as the needs of his caregivers should occur in order to determine how this custom home could support the varied needs of the users in this residential space. The results of these efforts were examined and analyzed, and used as a basis to propose effective interior design solutions (see appendix). The observed results of this exploratory study are significant. First, exposing students directly to a child with special needs, specifically CP, was reported as extremely enlightening by the junior-level students. Strong feelings of empathy as well as a willingness to excel in order to help the client indicates robust validation for exposing scholars to clients who retain special needs, and several expressed feeling a renewed inspiration in the discipline related to the future clientele that they hope to encounter as professionals. Second, critique of the student design solutions by the client as well as local design professionals suggests that valuable proficiencies were gained in mapping Universal Design principles to the specific CP symptoms experienced by this child as well as the needs of his caregivers. Instead of haphazardly proposing design solutions which might solve the problems of one individual living in the household, students were able to contemplate those solutions which function equally well for all affected family members using this method. This approach should resonate with design educators, as the byproduct of such activities is students who realize the social impact of their decisions and master the inquiry techniques used to create successful solutions.

REFERENCES


Trachtman, L. H., Mace, R. L., Young, L. C., & ; Pace, R. J. (2000). The Universal Design Home: Are We Ready for It?. Physical & ; Occupational Therapy in Geriatrics, 16(3-4), 1-18.
Shape Your Shelter

Mona Ghandi, Washington State University

ABSTRACT

Amidst the development of our big cities towards making better educational, residential, and social spaces, there is a lack of recognition for those who are unable to keep up with the fast pace of capitalistic life. Acknowledging the fact that a lot of people are left behind in this competition ruled by consumerist values, designers’ contribution in finding ways to help those people to reunite with society is crucial. How can designers engage in social issues and explore design solutions for improving the community and society? As an educator, I find my role to research issues facing cities and assign projects to students that contribute to resolving those obstacles.

The focus of this design-build studio was on homelessness as an issue prevalent across this country. Walk through the downtown core of big cities, look down the alleys, around the hidden corners only to find people struggling to survive. Homeless are most often unable to acquire and maintain safe, secure, and adequate housing. There are approximately 1,185 homeless individuals living in Spokane including about 170 homeless families, most of whom are suffering from the extreme consequences of poverty. This requires initiatives for affordable housing. To ameliorate this social issue, this studio focused on designing an affordable (under $1000), portable, adjustable, foldable, and self-standing shelter, using computational design methods and emergent technologies. While aiming at tackling a social obstacle, this studio’s objective was also to promote learning of new methods of design grounded in computational design, digital fabrication, and material behavior, all of which enhance students’ perception of algorithms, design computation, mechanism, spatial quality, and behavioral and human factor. The goal was to design a shelter that not only would provide a safe place for the homeless and accommodate their basic needs, but also make an environment to play. Most importantly, it could function as a business incubator or a pop-up shop to give a homeless the ability to become financially
independent. This would lead them to recovery and regain their dignity. Students individually designed stackable and portable shelters to accommodate both individuals and families. One final selected project was collaboratively built in full scale to be tested by a homeless volunteer. This project was a lightweight pre-fabricated foldable shelter that could undertake eight different configurations achieved by taking advantage of origami flexibility. The possible owner can manipulate the structure to increase natural ventilation or the retention of heat depending on the season. They may choose to have their shelter be a place of gathering, a private space, a pop-up shop or an area for family or communal expansion. The detachable tessellations found throughout the structure allow for control of natural lighting, ventilation, water collection, social interaction, and personalization. This portable shelter can be carried with a single person making it not limited to one place. By considering it as an urban sculpture or a portable green installation, it could also serve the public and could be considered as a medium of interaction between society and homeless people to further raise awareness of this issue. In conclusion, in this studio, students identified proper methods of design inquiry and problem-solving processes to generate creative solutions to a social problem. They synthesized information from multiple sources to establish design parameters and develop genuine conceptual frameworks. They also applied research, theory, design precedents, regulations, and established conventions as appropriate to inform design decisions. In the end, this shelter that can transform to meet different needs throughout the day will hopefully be known as a long-term solution to a significant problem of homeless population, and it might be considered as a homeless shelter of the future.

REFERENCES


ABSTRACT

Service-learning projects provide excellent opportunities for design instructors to introduce genuine budgets and schedules, and for students to experience team dynamics and conflict resolution. Building skills in these areas can be difficult when using hypothetical clients and design problems in a studio format. As Sterling (2007), points out in her article Service-Learning and Interior Design: A Case Study, “There is a necessity for students majoring in interior design to have a variety of experiences that simulate work-related projects and processes” (p. 333) to better equip them to move into the profession. Typically, service-learning projects are recognized for the gratifying experiences they provide as noted by a student’s reflection journal response: “It was a fun way to not only get the chance to work with a community… but feel like you are making an impact on them.” In addition to providing a sense of satisfaction for students, service-learning can also address CIDA Standard 6n: The interior design program provides exposure to the role and value of public service (Council for Interior Design Accreditation, 2016). These types of projects, however, are providing another set of skills not easily attainable in the classroom, skills directly related to project realism. For this class project, students proposed renovations for a low-income housing community’s learning center. The institutional studio design course utilized the four criteria for service-learning outlined in the article Deconstructing Service-Learning: A Framework for Interior Design: relating the service-learning project to course objectives, applying course knowledge, connecting to the community, and reflecting on learning (Zollinger, Guerin, Hajiyanni, and Martin, 2009). Student reflection journals from the class included comments such as, “I think this project has exposed us to things that we never
could have learned in a ‘normal’ studio class,” and “This is more real than anything we have done in school so far.” One clear outcome of the course was students’ understanding of the requirements and constraints of an authentic design process. These experiences can help the students deal with disappointments and face some of their fears now, before they graduate. One student commented in her journal prior to the start of the project that she was “worried about being able to join client wants with the practicality and budget.” Professional designers encounter such concerns every day, but these considerations are not usually integrated into the classroom experience. In Gerald Eisman’s piece What I Never Learned in Class: Lessons From Community-Based Learning (2000), he identifies studies completed by Janet Eyler and Dwight Giles, which confirmed that students who participate in service-learning are more thoughtful and effective and that experiential learning opportunities introduce the complexities of real-world design issues leading to greater confidence in students. Opportunities for realistic and practical skill building seemed to manifest in this service-learning project more naturally than in a typical studio. It can be challenging in a studio course that introduces service-learning to ensure both that the course learning objectives are met and that the community partner’s needs are achieved where students are forced to reconcile their own wants for the project with the requests from the client. Despite these challenges posed by a service-learning project, the practical skills, connection to community, and valuable experiences are worth it. As one student put it, “It was rewarding enough to meet and interact with the community, but even more rewarding to have created a space for the community we had become so involved with.”

REFERENCES

Student Engagement with Displaced Populations

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ABSTRACT

Between global climate change, war, and ongoing political and economic turmoil, a great number of people have had to leave their homes and communities. In addition to the loss of livelihood, these displaced populations also face the loss of their culture. To understand these issues and encourage students to develop an ethic of engagement, we developed a design studio course foregrounding the questions of culture and community in crisis. The pedagogical problem identified by the faculty was how to increase awareness and understanding of global issues, including climate change and cultural diversity, while learning research skills that can be applied in the interior design process. A strategy to achieve these goals was accomplished in stages. First, the required studio course shifted focus from high-end retail to a cultural community center with a supporting retail component. The program and site for the project were modified to accommodate the new goals, and a more elaborate research portion was introduced into the course (appendix). Second, during the course, faculty emphasize research, learning and practicing a range of tools and techniques, and requiring students to present at an annual conference on “global challenges.” Thirdly, the research is consistently integrated into the space planning, detailing, and presentation of the design project. The markedly different and improved outcomes demonstrate the success of this approach. Students note that they are better trained in research methods and application, and they feel more confident in their ability to engage with global issues. The design work (appendix) reflects these abilities in both the research and design presentations. Learning to respond to issues of community and social justice drives the design
process. Students work in teams researching displaced groups from the UN list of refugee populations, studying the cultural history and issues that led to displacement. Students interview members of the displaced group to understand the specific conditions and needs of the affected people. In preparation for this work, students are introduced to methods published by Luma Institute and John Zeisel, and then workshop techniques and engagement skills they employ when researching and designing. The research work is developed over the first half of the course, culminating in a public event in which teams present their findings on the refugee group, highlighting unique aspects of the specific culture. Simultaneously, students begin analyzing the site and investigating the program requirements. They visit the site in person, tour local retail places, and present case studies of retail and community centers. Students develop schematic designs that demonstrate an appropriate response to the program requirements and specific understandings of the cultural group including, for example, the relationships between men and women, particular religious needs, or expressions of color. Students further integrate their findings into the design process through space planning, detailing, and sustainable building strategies. Final presentations include and are evaluated in context of the original research. Through this process, we are able to weave together fundamentals of research and design pedagogy with important global issues like culture and sustainability. This presentation reviews ways studio courses can respond to some important problems in interior design practice and pedagogy: 1) How do designers learn about the culture and community of marginalized groups? 2) How do we understand and respond to issues such as climate change and population displacement? 3) How can we create awareness of these issues and the impact design can have in addressing them, while satisfying technical and skill-building needs of students? As broad as these questions appear, this studio has managed to successfully navigate these concerns and generated student work that engages and responds to these issues.

REFERENCES


A Program’s Journey Toward Meaningful Student Public Service

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ABSTRACT

Problem
How can we effectively teach public service? After all, it is an opportunity to make a difference (Public Service Careers, 2015). It is supplying a service to the community. It fosters physical/mental wellness, connects people, promotes personal fulfillment, and teaches job skills (Segal & Lawrence, 2017). It helps one gain mentors, networking contacts, and job references (Kane, 2017). The challenging issues of today’s public agenda call for talented individuals to find societal solutions. Understandably, public service is now a component of design education (CIDA, 2017). For educators, public service offers even more. It engages students, mentors freshmen, promotes teamwork, develops leadership, requires idea generation, promotes interdisciplinary collaboration, and improves retention.

Strategy
In response to CIDA’s “public service” indicator (CIDA, 2017), an interior design program launched its first required student involvement in public service in 2015. The service focus was left to student choice, but six hours of public service each semester. At the semester’s end, students scampered to find service opportunities, most have no connection to interior design. It
quickly appeared that the message of social responsibility had been minimalized. Faculty purposed to improve future public service by involving students in projects that entailed interior design skills and promoted a better understanding of social responsibility. In 2016, a 10-hour public service charrette (Appendix A) involved students in programming, conceptualization, design development, presentation, and evaluation. This service opportunity with a faith-based organization developed when research revealed that local poverty families needed a place to shower and wash clothes. The idea to design a community shower/laundry facility was born. Each student team included students from all levels; seniors served as captains. This team structure established vertical learning where upper-level students peer-mentored lower-level students while lower-level students contributed enthusiasm and energy (Drury, 2013). Students experienced the “dynamics of collaboration” (CIDA, 2017). As students shared responsibilities for achieving a final product, camaraderie resulted. This structure created friendships across levels rather than leaving freshmen isolated (Drury, 2013). Faculty hoped this student-to-student instruction could also improve freshman retention.

Outcomes
The program experienced the following outcomes: · positive feedback from students, faculty, organizational advisory board, and community · improved freshman retention rate · achievement of CIDA indicators—collaboration, communication, integrated team process, human-centered design, design process, and public service (CIDA, 2017). · client appreciation · public recognition of program success Faculty reviewed the 2016 feedback and planned improvements for the 2017 charrette (Appendix B): · spread charrette over three days instead of two to reduce student stress (Appendix A) · expand 10-hour charrette to 15 hours to allow more conceptualization and production time · design a volunteer fire department for a neighboring community ‘Students again experienced the design process (Appendix C). The 2017 student post-event evaluation (Appendix D) indicated overall positive student reactions and a particularly positive freshman response (Appendix E). In conclusion, the public service endeavor provides an exciting and meaningful beginning for the academic year. Besides the benefits mentioned, faculty observed more student engagement in the curriculum, positive greater participation in student design organizations, and a closer-knit student group.

REFERENCES


An Adaptable Space of Sound and Vision: Proposals for a Small Town Historic Theater

Kevin Moore, Auburn University

ABSTRACT

A community non-profit invited Interior Architecture students to imagine possibilities for a small town historic theater. The abandoned cinema is proposed to be reborn as place for the community and tourists. In fact, the non-profit has embarked on an ambitious life-long program of “154 projects aimed at fostering community, attracting tourism and spurring growth.” The theater is just one piece of a larger restoration effort. Before designing, students measured the existing building and participated in a community workshop organized by a regional architecture firm. During the workshop, the citizens of the small town imagined the theater to host films as well as a range of other community meetings and banquets. While the theater could be flexible—“capable of different physical arrangements”—the workshop suggested it also be adaptable—“capable of different social uses” (Schneider and Till 2007, 5). A further ambition of the studio was to conceive the theater as an “illuminated interior” that fuses sound and vision into a definition of space. Contemporary cinemas employ widescreen projection and surround sound to immerse an audience in the space of the film. The history of theaters, however, offers additional possibilities. Nickelodeons, the first venues to project motion pictures, also collected a variety of nonfilmic activities into a lively interior where “the audience remained conscious throughout of ‘the actual theater space’ and their collective place within it” (Ameri 2013, 445). This is an attractive option for a multi-purpose theater conceived of as a community gathering place. There are acoustics options, too. In a contemporary cinema, absorptive materials remove the acoustic space of the room in deference to the soundtrack. However, reflected sound can create “the subjective impression of being enveloped by the sound...the difference between feeling inside the sound and
feeling on the outside observing it, as through a window” (Beranek 1992, 8). In this way, sound illuminates a room. A large room, in particular, adds spatial information as reverberation. In an attempt to understand how sound can define the shape and quality of space, students calculated reverberation times throughout the design process. This became a practical method to fine-tune materials and patterns of interior surfaces including screens and perforated panels. In addition to computer models, students constructed large physical models to anticipate lighting and material effects. The final projects propose a range of options loosely categorized as solutions with retractable seating; single multi-purpose rooms and objects inserted into a large volume. Further details include adjustable furniture, lighting and curtains for hosting a variety of events. Students presented their proposals in the theater and prepared a booklet documenting the work. The non-profit used the drawings and models from the studio as visual aids for a successful grant application to hire professional design services. An additional grant towards Phase I construction was also recently awarded. While proposed acoustic effects were difficult to explain in drawings, the models proved to be powerful tools of persuasion. The models were even displayed in the theater during an annual festival to generate excitement for the possibilities of a renewed space of sound and vision at the center of the small town.

REFERENCES

Teaching Sustainable Design to Non-Designers:
Lessons Learned from a Cross Disciplinary First Year Seminar

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ABSTRACT

Context:
In order to meet the requirements of a new university wide academic core, a First Year Seminar (FYS) was developed in the fall of 2016, focusing on sustainable design and well-being. The importance of sustainability in the curriculum, particularly early on, cannot be overlooked (Gürel, M. Ö., 2010). For the first year student, good habits of thinking, both critical and creative, can be achieved through any discipline, and one need not have a proclivity towards a specific subject for success and positive learning outcomes. As a result, a wide variety of majors can populate an FYS course. The notable challenge for the instructor of design is to effectively mentor both design majors and non-majors through a somewhat complicated design process. The problem: Design can be intimidating, particularly for the first year student, and it’s important to create a project that allows students to tap into their creative thinking potential without the barriers of knowing specifically how to create a space plan, a rendering, or an architectural model. Additionally, teaching a student how to effectively communicate a conceptual design without those skills, provides a further challenge both in presenting a solution and assessing a student outcome. Sustainable design, which has been a core component of this program for two decades, was of course the common thread throughout the course.

The method:
As a final project, and in order to break down the complexity of a large project, students were divided into groups of four students that were charged with this over-arching task: find a marginalized population that would benefit from a sustainable design solution. LEED criteria were used as the conceptual framework to both learn sustainable standards and solutions, and to evaluate the finished product. Sustainable solutions for energy usage, water conservation, indoor environmental quality, waste management, and surfaces were detailed in the project. Furthermore, students were required to comprehensively evaluate how the solution would address and exemplify the three pillars of sustainability, including an extensive discussion on components of the design that would lead to enhanced well-being of the marginalized occupants. Additionally, students exercised critical evaluation of their design by examining their solution through the lens of five points of view—legal/political, ethical, economic, scientific, and social/cultural. Evidence supporting the rationale behind choices was a major component of the process, increasing the rigor of the assignment.

Outcomes:
As this was a new course, taught to a new group of students without a design background, the instructor had few preconceived notions of what the students might produce. In particular, the choice of, and sensitivity to, marginalized populations was encouraging. With solutions ranging from a prison that would reduce recidivism through day-lighting and biophilic design, to a clinic that promoted healing for Native Americans on a large reservation, students showed a surprising understanding of their population’s needs and how design could improve lives. Three themes emerged from evaluating the projects, turned in by 24 students in 6 groups. First, students were able to make a clear connection between well-being and sustainable design. Second, a non-design background was not a barrier in understanding and translating a sustainable design solution. Third, teaching the environmental considerations of sustainable design simply by incorporating LEED criteria as the framework, seemed a viable method of instruction, even for first year students.

REFERENCES

ABSTRACT

Motivation
Design students, among the strongest in universities, have a glaring weakness in one area: oral communication (Boyer, 1996). Excellent oral presentation skills improve critical thinking and build the communication abilities important to civic, personal, and professional contexts (Jaffe, 2012). They keep design presentations focused, lead to richer dialogues, and invite people outside the profession—whose native language is spoken, not graphic—into the design conversation.

Problem
Unfortunately, interior design students often graduate without any formal training in public speaking. Polling over thirty interior design seniors revealed that only five had taken a public speaking course in either high school or college. Those who had did so outside of the studio context and its unique nuances: the accommodation of large two- and three-dimensional visual aids, fatigue, and intense challenges from jurors.

Opportunity
Interior design visual communication and studio classes are the best places to introduce and practice oral presentation skills. Students learn how to organize their design work in visual communication classes. Organization is the foundation of strong oral presentations, establishes sound rhetorical arguments, and reduces anxiety. The studio is where students can practice public speaking in a diverse array of modes, including small groups, formal thesis critiques, and community presentations. Most importantly, students present work graphically, the intensity of which is difficult to simulate in general education classes.

Methods
A public speaking primer was developed for interiors students and paired with a critique format designed to increase oral presentation practice. Primer Developed for introductory visual communication classes, the primer focused on organization, visual aids, gestures, eye contact, feedback sessions, anxiety reduction, and audience participation. Presented in an outline format (intended as a model), these lessons emphasized the preparation often omitted in the rush to assemble final boards (Fig. 1).

Practice
Studio courses then provided explicit opportunities to practice these skills in a round robin critique, constructed so that each student could present their work twice within the same studio time period. First, students were divided into three groups. Then the studio meeting time was divided into thirds. Finally, guest critics were divided into two pools. Groups were assigned to two of the three time periods. During a given time period, two of the three student groups were in critique; the third group participated in one of the reviews as critics. (Fig. 2) Students all had responsibilities during their group’s presentations. One monitored the time, providing notification of important benchmarks and signifying the end of each discussion. The remaining students took notes for the colleague presenting. These responsibilities rotated for each student presentation in a given time period. At the end of one period, jurors rotated to a new student group; again, one group of students sat in on another critique. This rotation repeated once more, until each group had presented twice, each time to a new set of jurors. The instructor remained with one set of jurors to ensure every student project was reviewed at least once.

Reflections
This format demanded advanced organization from the studio instructors, more jurors, more coordination, three critique spaces, and tighter control of timing. It also worked best in studios with nine-to-twelve students. However, the format permitted more practice time in front of guest
critics, more engagement from the studio cohort, smaller review groups, more intimate discussions, and a more relaxed atmosphere. Students noticeably demonstrated increased comfort with public speaking within a single studio session, and guests, without exception, noted the enhanced quality of the oral presentations during closing remarks.
Figure 1: A six-page primer is introduced in introductory visual communication sequences.
Speak Loudly and Carry a Small Stick
Promoting Better Public Speaking in the Interior Design Studio

Figure 2: Round-Robin critique format
A Pecha Kucha about a Pecha Kucha: Engaging Students in a History of Interiors Course

Julie Irish, University of Minnesota

ABSTRACT

The challenge: how to engage students in a history class for two hours twice a week? Jennings (1998), in a JID issue devoted to teaching interior design history, articulated the need to invigorate course material to counter boredom. Teaching pedagogy suggests that students retain knowledge better if they research topics themselves and disseminate that to their peers (McKeachie & Svinicki, 2013). Inspired by the IDEC Pecha Kucha format (IDEC, 2017), this assignment asked students in a course History of Interiors & Furnishings 1750 - to date to prepare a Pecha Kucha to present in class. Working in pairs, students were randomly assigned a specific Pecha Kucha topic at the start of the semester relating to the course schedule. The assignment required them to prepare a slide presentation of 20 slides to be viewed for 20 seconds each along with an accompanying timed verbal presentation. Students were advised that the presentation should be visually heavy with only a few captions; the first slide should contain students’ names and title of the presentation; and the final slide should be a list of references in APA format. Depending on the topic assigned, students were asked to provide a context for the topic, e.g., the area, the designer’s background, how the design came about, and, if appropriate, highlight the merits and demerits of the design. Students were instructed to upload slide presentations to the course website by the due date, that slides should advance automatically, and that both partners should speak during the presentation. Learning objectives included the ability to research historical material; to synthesize information and communicate it to peers in a visual and verbal format; to practice presentation skills; and to work collaboratively in a team. These were also
considered important workplace skills. Grading criteria were that the presentation demonstrated thorough research providing a context and visual and verbal description of the topic; the information was synthesized; an appealing visual presentation showcased the topic; and a concise verbal presentation. To evaluate, the instructor wrote comments on the grading sheet while listening to the presentation and awarded a preliminary grade. Later the instructor reviewed the slide presentation in more depth and adjusted the grade as necessary. The course met the Liberal Education Requirement attended by a diverse group of 32 students, IDES and non-IDES majors. Presentations took place throughout the semester, generally one each week. The course was presented in chronological order and topics related to the weekly schedule, e.g. Syon House: An Adam’s Masterpiece for Georgian and The Breakers: The Gilded Age for Late Victorian. As well as buildings, topics also focused on particular designers, e.g. Ralph Rapson: Modernist at the University of Minnesota and Glasgow Style: Charles Rennie Mackintosh. Some topics showcased design movements in general, e.g. Pennsylvania Germans: History, Culture, and Furniture and Gustavian Style: Then and Now. The course focused on US and European historical interiors but the Pecha Kuchas enabled the class to look briefly at non-Western design, e.g. Napier: An Art Deco City and Asmara: A Modernist City. Students who presented non-Western topics were noted to be particularly engaged with their subject. This also led to class discussion about the global imposition of European styles by ruling nations versus the vernacular. The advantages of the Pecha Kucha format were that it varied the instructor lecture format and allowed the class to delve deeper into historical subjects that otherwise there would not have been time for. It also injected some energy into what could have been another boring student presentation. The disadvantages were that some presenters spoke so quickly other students had difficulty absorbing the information. In future the length of slide presentation might be extended, to the horror of Pecha Kucha purists!
Holkham Hall: A Showcase for Neo Palladianism
Napier: An Art Deco City
Asmara: A Modernist City
Using the Real World as a Classroom: How Collaboration & Human-Centered Design Teach Empathy

Anna Ruth Gatlin, Auburn University

ABSTRACT

A collaboration between University Dining and the Interior Design Program’s Interior Materials course fully engaged students in a real-life design project. Students competed in teams during the Spring semester to win the project—re-engineering the student experience of the Village Dining Hall—and the winning team had to implement the design over the Summer. The Director of Dining wanted to ask the right question, provide a solution that resonated with the target audience—students—to more fully engage them with the space. Asking students to design for other students allowed for an empathetic design solution. For the Interior Materials class final project they were divided into teams of six, and were given a real-life budget of $150,000 to work with. The project followed IDEO’s Human-Centered design process. The students immersed themselves in the needs and desires of the target population to understand what was missing from the Dining Hall. They collected pre-design data through observation, interviews, and surveys. They ideated multiple solutions within the constraints given, then refined their designs into one solution per team, which was fleshed out in its entirety with presentation renderings, construction drawings, schedules, and finish material choice. One team also prototyped several logos and did market research to hone the University Dining brand. All teams presented their design solutions to the client, the Director, and a panel of students and administrators. One was chosen to execute. The winning team, Team 6, was successful because they reframed the dining hall’s brand, and sought to engage the users on several levels, and not just on processing people through a food line efficiently. The users were given rotating content to engage with, and student-executed art was
installed throughout the space. Members of the chosen team continued to work on the project through Summer implementation, with their professor as the Design Principal of this improvised design team, revising construction drawings based on feedback from the panel and working with the contractor for feasibility. When construction started, the students began to see their first ever real project come to life. Their growth as designers was exponential as they grappled with the dissonance between ideating something and implementing it. They learned to collaborate with other disciplines and explore creative solutions while on a jobsite. The project was a success in that the end results looked strikingly like the original student presentation renderings. But the biggest accomplishment was that they students grew as humans, who began to have empathy not just for the users, but also for the people who implements the design solution. They realized that Human-Centered Design isn’t just about the end user or target population, but about every person that is involved in the process. Applying a practical project with real-world constraints is applicable to all interior design educators. A real-world project has constraints that are difficult to teach in class, but that when learned in school can be applied a number of times prior to a first job. And by turning the implementation of the project into an internship with a university facilities group, students can practically apply their design and understand flaws, the logic of construction, and challenges such as “universal design” in a less abstract way than in studio. At times, we as faculty forget how little students may know about the “real world” of construction, or how terrified we were the first time we walked onto a job site or interviewed a client. By being present with the students and guiding them through these “firsts”, their learning was enhanced, and we as faculty are reminded how important it is to approach our teaching from a human-centered perspective—that of the humans we are entrusted to teach: our students.
Using the Real World as a Classroom: How Collaboration & Human-Centered Design Teach Empathy

Village Dining
Student Surveys

Desired Usage

68% of students say atmosphere affects dining choice

Image 1: Market Research
Image 2: Entry to Buffet Line

Image 3: Conceptual Rendering of Re-Charge Room
Image 4: Conceptual Rendering of Main Entry

Image 5: After photo of Main Entry
Super Villains: Designing for Restraint or Rehabilitation in the Comic Book Universe

Steven Webber
Florida State University

ABSTRACT

Introduction
Art, human-centered design, and fantastical storylines characterize this student design charrette involving the design of a correctional facility for four supervillains. The faculty who created the charrette drew inspiration from the variety of correctional facilities depicted in the Marvel and DC fantastical universe. Student teams were composed in groups of four students each to include a cross-section of expertise spanning the second, third, and fourth-year design studios. The charrette was frenetic in pace, lasting a mere five days.

Process
Interior design faculty collaborated with faculty and a PhD. student in the Department of Art Education in the College of Fine Arts and the College of Criminology to set the stage for the charrette. Lectures on the role of genetics in crime and the use of art therapy within prison settings provided theoretical and practical knowledge contexts to help the students begin to conceptualize their design work. No existing floor plan was provided, but a loose program dictated that space(s) for exercise, bathing, and dining must be addressed along with holding cells for four supervillains. Thirty teams of four students each participated in the charrette. Half of the teams designed a facility for four male supervillains, Dr. Doom, Mad Hatter, Bane, and Green Goblin, each possessing a unique set of traits and special abilities. The other half of the teams
designed for four female supervillains, Black Widow, Joystick, Lady Mastermind, and Callisto, also with their own set of unique traits and abilities. The facility for males was named “MAO-A” after the male genetic code linked with violent aggression, and the facility for females was named CDH-13 after the female genetic code often linked with violent crime. Students were encouraged to select a real or fictitious location for their correctional facility and describe their approach to balancing rehabilitation and security. Concurrently, students were to narrate the backstory for each character contained in the facility, how they were captured, and how they spent their time in the facility. Design success relied upon the students’ ability to balance the practical underpinnings of the role of art therapy in prison settings and the influence of genetics on crime with the fantastical nature of the design scenario. No constraints on visual communication types were provided, other than the teams were limited to a two-foot by four-foot area of wall to present their design solutions. Students were not permitted to present the work audibly, rather, they were to rely solely upon their visual presentation to carry the design communication.

Outcomes
The design process concluded after five days as the student teams pinned up their work prior to the deadline. Faculty judged the work based upon completeness of the design program, creativity in addressing the fantastical inspiration of the work, visual craft of hand or digital drawings and graphic elements, and written concepts and notations to describe the design intent. Due to the lack of existing floor plan, or building in general, student design solutions varied widely to include correctional facilities inside icebergs, on top of volcanoes, in lunar orbit, or shrunken down and inside a guarded briefcase. With this variety, each team provided highly creative solutions that they took ownership for and for which they passionately executed illustrative drawings and models. Top teams received monetary prizes and certificates in recognition of their excellent work.
Student Work Sample.
Charrette Logo.
Pecha Kucha

Creating Meaningful Spaces in Design Studios

Petra Probstner, Columbia College Chicago

ABSTRACT

There are obvious upsides to having access to online information and opportunities for sharing, but there are downsides too, especially for design students. For one, with the access to overwhelming amounts of design inspiration, the student of the “Pinterest generation” often feels like everything has already been done. Further, there is a strong temptation for the beginner designer to echo what is already out there, but these “cut and paste” designs feel incoherent and empty. They are not unique to the student and lack identity, soul and are void of meaning.

Responding to this concern, we created a design studio that aimed to help students successfully create unique, meaningful, and immersive spaces that are location-, issue-, brand- and artifact-specific. These spaces aim to be independent from trends and are more than an assemblage of pretty materials. We focused the studio around the construction of spatial stories. These stories are based on research that clearly demonstrates that the ability of utilizing the narrative helps students shift their focus from an aesthetic consideration of the design and focus on product, to an emotional connection with the design and a focus on the person. We use spatial storytelling to help students embrace multiple user experience perspectives and explore human-centered space making as a method to convey cultural content. (Danko, S., Meneely, J., & Portillo, M., 2006).

The class employs a framework that involves exercising multimodal narrative methods at three different scales; one building on student’s personal experiences, and two driven by clients resulting in retail and exhibition typology. Project 1 The first warm-up exercise is a spatial experience project focused on the first-person perspective. Students draw from a multi-sensory journey through a meaningful space in the city with a special focus on personal meaning, historical context, tactile texture, and olfactory and acoustic integration. Students use a variety of interior design tools, such as concept-making, form-making, material specification methods, color theory, and human behavior theories to create a spatial environment. The result is much like an art installation, where visitors can relive (the whole or a part of) the catalyzed experience. The
results are presented in video format, a great medium of a multimodal narrative that includes methods of visual, verbal, and acoustic communication. Project 2 In the second project students respond to a consumer product that aims to combat a multi-layered global problem. Students are assigned to create retail spaces for these products where every design element is aligned to the story their brand aspires to tell. This story including the global issue, the story of the brand and product, and the lifestyle story of the targeted users. Project 3 The third project expands the preceding narrative explorations to a large scale when a museum exhibit space is inserted in an existing building for a real client. The story in this case was told through the design concepts, spatial sequencing, pace, display systems, graphic treatments and activities as well as the artifacts themselves. The students’ designs focus on mapping, and manipulating the visitor experience to create a meaningful environment and to contribute to personal relevance of the historical display. The student outcomes of these projects proved the theory that the application of the narrative method as a driving force in student projects promotes a heightened sense of user empathy, enhances multi-sensory conceptualization and visualization, and promotes a greater tendency towards holistic thinking (Danko, S., Meneely, J., & Portillo, M., 2006). In our classroom, using the narrative method, students created user and visitor-centered, coherent immersive spaces. They displayed empathetic approaches and as a result their spaces were unique to their story and displayed a lot of personal qualities.
Inspired by Gladioli, this brand by Boudicca brings the color and the scent together in one bottle designed for luxury experiences. "Fragrant the weather on a multi-sensory journey through warm and coolness, animal notes and amber elements.

Student Work Example
Sample pages from presentation
Brand narrative - retail space
Student Work Example
Sample pages from presentation
for narrative museum exhibit space for real client
Student Work Example
Sample pages from presentation
for narrative museum exhibit space for real client
Native North American Hall

An exhibition design submitted by

SPACE PLANNING

A river is a physical manifestation of our concepts. It embodies resilience and adaptation, much like the Native American peoples. We translated the form of the river into a flowing storyline to move people through the space in a way that funnels them to see things and interact.

PLAN + SECTION

Plan Key

- [ ] - [ ]

Student Work Example

Sample pages from presentation
for narrative museum exhibit space for real client
Pecha Kucha

Drawing down the bones: Five creative design processes adapted from Goldberg’s methods

Lindsay Tan, Auburn University

ABSTRACT

This pecha kucha presentation adapts five of the creative writing processes described in Natalie Goldberg’s “Writing Down the Bones” and applies them to the design process, with specific emphasis how these processes could be used to shape student learning in the studio environment. Designers have always existed at the intersection of creativity and objectivity, bridging gaps and communicating across disciplines. We borrow theory and methods from the social and physical sciences. Here we borrow from the Humanities. The five processes that will be presented are: 1) First thoughts: In which the student commits to a specific period of time – ten minutes or an hour, it doesn’t matter – to design through drawing, to keep the hand moving and the mind ideating. First thoughts, as a process, is more than just a warm-up period; to be successful in this processual approach we have to ignore the internal editor – don’t erase, don’t worry about drawing conventions or codes – and be unafraid to lose control and design with lots of energy until the timer runs out. 2) Tap the water table: In which the student commits to the practice of designing. Input is good, but reading about and viewing good design will not make someone into a good designer; to become a good designer we must design. When we tap the water table, we don’t worry about talent or capability to design or to draw; we simply engage in designing. And when we do consume design, we should not become overly obsessed with analyzing and criticizing it. There must be space to simply exist with the design, to memorize its lines, forms, and colors, and its emotional presence in that moment. 3) Don’t marry the design: In which the student commits to being awake, present, and alive in their design work. Design opens a lot of avenues within us, but we cannot let our minds wander too far astray. Do not become self-indulgent over certain design details or ideas; remain focused on the goals of the work. Stay on the side of the client; don’t marry the design. 4) Make statements and answer questions: In which the student commits to cutting the qualifiers from their work. Design is doesn’t just happen by
some magic; designers make it happen. Perhaps this could be… Maybe you might try… Somehow you could… We need practice in trusting our own minds so that we can learn to stand up beside our drawings and say definitively: It is. 5) Spontaneous design booths: In which the student commits to letting go of ownership. Take a stack of paper, and a pen, out to a craft fair or a bazaar and set up a booth. Sell on-demand designs for a dollar each. This is a practice in becoming unselfconscious in ideating and drawing. Draw, in the moment, and then let that idea go – into the world. Even if a design is particularly successful – release it, take the dollar, and move on to the next one. These five creative design processes position the student as an authority, a designer in their own right from Day One. These practices are designed to de-emphasize the role of the critic in the creative process. There will be time enough later for analysis of the work, critique, redlines, or rejection of ideas. There is a time for the critic, but it is not in the creative moment.
Appendix

This presentation will use verbal narration to provide substantive content and stunning visuals to engage and inspire. All images provided in this appendix and in the presentation are used in accordance with the creators’ stated licensing requirements, and do not require attribution.