The Environmental Design Research Association (EDRA) welcomed practitioners, researchers, and educators to the 52nd annual conference to collaboratively rethink how environmental research and practice may serve as a foundation for change and justice. EDRA52 took place in Detroit, Michigan, UNESCO City of Design.

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Thank you to:
Sharmin Kader, Chair of the EDRA Board of Directors, for her support and help in compiling the proceedings, Jamie Steis and Barbara Aylesworth, for their help in organizing Mobile Sessions, and Lisa Findley, for help in copy-editing of selected full papers.
Introduction to EDRA52 Detroit Proceedings

>> EDRA52 Proceedings are an essential component of the EDRA52 conference, ensuring the knowledge shared during the 52nd Environmental Design Research Association Annual Meeting is communicated and available to all interested scholars.

At the EDRA52 Conference held online - in “virtual Detroit” - from May 19-23, 2021, more than 700 presenters and attendees represented 32 countries and participated in a variety of concurrent sessions and events. The conference was hosted by the University of Detroit Mercy School of Architecture and Community Development, and Wayne State University.

The Environmental Design Research Association (EDRA) is an international, interdisciplinary organization founded in 1968 by design professionals, social scientists, students, educators, and facility managers. EDRA came into being during a period of social awareness and social unrest, but also new horizons and new visions. True to its origins, EDRA continues to believe in an agenda of social responsibility that has grown from a barely perceptible idea to a more fully-formed vision for healthier, more democratic human environments. EDRA’s mission is to provide a collaborative, multidisciplinary community to connect theory, research, teaching, and practice to recognize, create and advocate for environments that are responsive to diverse human needs. EDRA is committed to equity, inclusion, and respect for all persons.

EDRA52 DETROIT JUST ENVIRONMENTS focused on how research, design, and relationships between people and environments contribute to the creation of justice. Current social, health, environmental, and justice challenges call for collaborative and transdisciplinary efforts to pursue intentional questioning of disciplinary borders and sensitive approaches to framing and addressing pressing contemporary problems through research and practice. The conference theme, JUST ENVIRONMENTS, aligned with EDRA’s critical mission of social justice, sustainability, and the improvement of the quality of life for all people. The conference subtheme, Transdisciplinary Border Crossings, focused on intentional questioning of disciplinary borders, inclusiveness, and sensitive collective approaches and speaks to contested issues related to physical borders, urban fragmentation, marginalization, and all types of exclusionary divides.

The program included more than 500 interdisciplinary presentations. In addition, 12 Virtual Mobile Sessions explored grounded work by Detroit groups and communities who are actively creating “just environments.” Paper and Abstract Sessions, Workshops, Symposia, Intensives, Practitioner-Researcher Collaborations, Posters, and Digital Media Shorts were grouped in conference themes: designing just places | creating just societies | building just communities | framing just worlds | accessing just technologies | supporting just movements | sharing just resources.

These proceedings include: Keynote and Plenary sessions overview, EDRA main events overview, full papers, individual abstracts, group presentation abstracts, and visual presentation abstracts. I hope this publication will be useful in disseminating the knowledge shared and built at the conference.

Thank you to all those who joined us at EDRA52 DETROIT. Together we can seek new ways to understand and build justice for all!

Claudia Bernasconi

EDRA52 Conference Chair, Editor in Chief, Proceedings of the 52nd Conference of the Environmental Design Research Association, 2021
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Thank you to the EDRA52 hosting institutions!
Toni L. Griffin is founder of urban AC LLC, based in New York, a planning and design management practice that works with public, private and nonprofit partnerships to reimagine, reshape and rebuild just cities and communities. The practice designs, leads and manages complex, and transformative social and spatial urban revitalization frameworks, rooted in addressing historic and current disparities involving race, class and generation. Over the past ten years, we have successfully collaborated with several major U.S. cities on the cusp of just economic recovery. Recent clients include the cities of Chicago, St. Louis, Philadelphia, Pittsburgh, Milwaukee, Memphis and Detroit. Ms. Griffin is also a Professor in Practice of Urban Planning at the Harvard Graduate School of Design, where she teaches design studios and seminars also rooted in issues of social and spatial justice. She is founder and director of the Just City Lab, an applied research platform that investigates the ways design can have a positive impact on addressing the conditions of injustice in cities.

other speakers:

Dan Kinkead
As a design architect and co-leader for SmithGroup’s national urban design practice, Dan brings over 20 years of experience in adaptive reuse, planning and development for individual buildings, districts, and cities. His work integrates creativity, analytical methods and community voice to realize benefits for residents, institutions and cities. From strategic plans, to the design and implementation of youth empowerment centers and abandoned railway stations like the Buffalo Central Terminal, Dan works to ensure outcomes that are enduring and impactful. Dan has served as an advisory member for the U.S. State Department’s submission to the 2016 Venice Biennale, and is a chapter author for several books regarding urban reinvestment and reuse, including Post-Industrial Cities: Lessons from North America and Europe, published by Carnegie Mellon and Routledge, UK (2016). Dan lives in Detroit with his family.

Marc Norman
Marc Norman is the founder of the consulting firm “Ideas and Action,” Associate Professor of Practice at the University of Michigan, and Director of Real Estate Initiatives at the Taubman College of Architecture and Urban Planning. Trained as an urban planner, he has worked in the field of community development and finance for over 25 years. Previous to his current positions, he has held leadership positions at Duvernay+Brooks, LLC as Managing Director and Deutsche Bank as Vice President in the Community Development Finance Group as well as led Upstate, A Center for Design, Research and Real Estate at Syracuse University. Norman has worked collaboratively to develop or finance over 2,000 units totaling more than $400 million in total development costs.
Justin Garrett Moore is a transdisciplinary designer and urbanist and is the Program Officer for the Humanities in Place program at the Andrew W. Mellon Foundation. He has extensive planning and design experience—from regional and urban systems, policies, and projects to grassroots and community-focused planning, design, public realm, and arts initiatives. At the Mellon Foundation, his work focuses on advancing equity, inclusion, and social justice through place-based initiatives, built environments, cultural heritage projects, digital and ephemeral programs, and commemorative spaces and landscapes.

**Description:**

What are we planning, designing, building, and maintaining? Where, why, how, and for whom? Designers and urbanists increasingly hope to develop anti-racist and equity-focused approaches to their practices to contribute to communities, cities, and environments that have been marked by injustice, neglect, and erasure. As the multitudes seek liberation and stewardship for people and the environment, it is important to promote an ethics of care in the built environment, and design fields of practice uniquely positioned to advance social justice in place. The ERDA closing keynote presentation will offer examples of collective actions, conversations, questions, ideas, images, and projects that demonstrate how we might grow capacity and power with designers and across disciplines and sectors to make positive change for people, places, and the planet.
Description:

This plenary explores the legacy of racism that continues to compromise the public domain of cities, robbing BIPOC urbanites of a sense of comfortability and excluding their voices from the planning and development process. It points to the amnesia that hides the symbols of white supremacy in plain sight and allows schools to continue offering an outmoded city-making education that prepares students to perpetuate racial injustice. It offers an interdisciplinary perspective on these issues, analyzing the history of real and perceived marginalization in the public realm and also opening the door to mechanisms that can result in a more just and equitable future.

The plenary is moderated by Sharon Egretta Sutton, an architect, environmental psychologist, and distinguished educator in multiple city-making disciplines. In her presentation, she finds fault with Bauhaus-descended pedagogy that prepares students to produce the commodities of a consumerist society that has permanently consigned many BIPOC workers to the bottom of the wage-earning ladder. She advocates for a decolonized pedagogy that prepares students to help build communities where residents share resources rather than selling them to the highest bidder, thereby wrenching control of the commons from the clutches of neoliberal capitalism.

Lauren Hood, an urban planner and native Detroiter with a background in business shares her perspective as an advocate for civic engagement strategies that advance inclusion in all aspects of life. She believes that the strategies envisioned by advocates of equitable development are woefully inadequate to address the racial injustice that the George Floyd moment revealed and calls for a bolder, reparations approach.
Description:
How can we create a more socially just and culturally diverse public space? Four experts from landscape architecture, urban planning, geography and anthropology address this critical question by outlining their working concepts and practice strategies as applied to contemporary public space. Julian Agyeman explores the concept of “just sustainabilities” in terms of what our cities can ‘become’, in relation to who can ‘belong’ in them. Jeff Hou shares methods of building community capacity and intercultural processes to co-create inclusive public space. Setha Low employs “spatializing culture” and a broader understanding of social justice to research and co-produce more equitable and democratic public spaces. James Rojas evokes a sense of place through Latino enactments and objects in their public and private spaces. Each presentation offers a glimpse into the richness of incorporating cultural meanings, notions of belonging, diverse concepts of justice and different forms of activism into the design, planning, management and governance of public space.

Setha Low is Distinguished Professor of Environmental Psychology, Geography, Anthropology, and Women’s Studies, and Director of the Public Space Research Group at The Graduate Center, City University of New York. She received her Ph.D. in cultural anthropology from the University of California, Berkeley and was an Associate Professor of Landscape Architecture and Regional Planning at the University of Pennsylvania before her current position training Ph.D. students in the anthropology of space and place, urban anthropology, security studies and ethnographic methods. She has been awarded numerous awards including the Athena City Accolade, a Getty Center Fellowship, a NEH fellowship, a Fulbright Senior Fellowship, and a Guggenheim Fellowship for her ethnographic research on public space in Latin America and the United States. Setha is widely published and internationally recognized and translated for her award-winning books on public space and cultural diversity. Her most recent publications are Spatializing Culture: The Ethnography of Space and Place (2017), Anthropology and the City (2019), and Spaces of Security (with M. Maguire) (2019). In 2019 she developed the TESS training on public space and social justice at UN Habitat in Nairobi, Kenya and in 2020 lectured on the public space and civic life at the Strelka Institute in Moscow, Russia. Her commitment is to both research and engagement to create a more just and inclusive city.

Julian Agyeman is a Professor of Urban and Environmental Policy and Planning at Tufts University. He is the originator of the increasingly influential concept of just sustainabilities, the intentional integration of social justice and environmental sustainability. He centers his research on critical explorations of the complex and embedded
relations between humans and the urban environment, whether mediated by governments or social movement organizations, and their effects on public policy and planning processes and outcomes, particularly in relation to notions of justice and equity. He believes that what our cities can become (sustainable, smart, sharing and resilient) and who is allowed to belong in them (recognition of difference, diversity, and a right to the city) are fundamentally and inextricably interlinked. We must therefore act on both belonging and becoming, together, using just sustainabilities as the anchor, or face deepening spatial and social inequities and inequalities. He is the author or editor of 12 books, including Just Sustainabilities: Development in an Unequal World (MIT Press, 2003), Cultivating Food Justice: Race, Class and Sustainability (MIT Press, 2011), and Sharing Cities: A Case for Truly Smart and Sustainable Cities (MIT Press, 2015), one of Nature’s Top 20 Books of 2015. In 2018, he was awarded the Athena City Accolade by KTH Royal Institute of Technology, Stockholm, Sweden, for his “outstanding contribution to the field of social justice and ecological sustainability, environmental policy and planning.”

Jeffrey Hou is Professor of Landscape Architecture and director of Urban Commons Lab at the University of Washington, Seattle. His work focuses on public space, democracy, community design, and civic engagement. In a career that spans the Pacific, Hou has worked with indigenous tribes, farmers, and fishers in Taiwan, neighborhood residents in Japan, villagers in China, and inner-city immigrant youths and elders in North American cities. He has written extensively on the agency of citizens and communities in shaping the built environments, with collaborative publication including Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities (2010), Transcultural Cities: Border-Crossing and Placemaking (2013), Design as Democracy: Techniques for Collective Creativity (2017), and City Unsilenced: Urban Resistance and Public Space in the Age of Shrinking Democracy (2017). Most recently, he served as a guest editor for the special issue on Guerrilla Urbanism (2020) for Urban Design International.

James Rojas is an urban planner, community activist, educator, and artist. He developed an interdisciplinary, community healing and visioning process that uses storytelling, objects, art-production and play to help participants understand their relationship to place and each other. Directly involving participants (as opposed to “audiences” or passive viewers) in re-imagining equitable growth and development in their community gives them the know-how they need to achieve their goals. This allows participants to examine landscape through a different sensory lens and teach people how to articulate their needs, ask better questions on the proposals, and projects, and ultimately find common ground through memory, experiences, and aspirations. He is an international expert in public engagement and has traveled around the US, Mexico, Canada, Europe, and South America, collaborating with municipalities, non-profits, community groups, educational institutions, and museums on transportation, housing, open space and health issues.
EDRA Awards & Recognition

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Caroline Makary, student volunteer, Great Places Awards
Rubaiya Binte Kibria, student volunteer, Great Places Awards
Study Title: Will COVID-19’s Re-design of Home Use Impact Community Engagement?
After Covid-19’s arrival, telework has gone from a practice carried out by a small part of the workforce, to a broadly acceptable and desirable environmental relationship to home. New interactions between work and home activities within the house are redefining the meaning of home to include aspects of public communications. This research aims at studying these phenomena to answer a specific question: will the recent development of positive digital group-communication attitudes and skillsets -affecting home conceptualizations and housing preferences- lead to higher public engagement? We will study these attitudes by comparing two groups of workers (a group of teleworkers and a group of workers in premises) with the aid a survey constructed from a modified version of the Organizational Assimilation Index (OAI) (Rubin, 2009). Our survey will account for the main elements that enable group communications’ desirability and practicality in the house; positive attitudes, group communication skillsets, and housing preferences. We believe that in the case of users who developed positive attitudes towards group communications, the level of desired community engagement will be higher. This study has implications for public policy and housing design since the use of public spaces and houses will have to accommodate other spatial needs derived from new public-private boundaries.
Tasoulla Hadjiyanni, Ph.D. is Northrop Professor of Interior Design at the University of Minnesota. A refugee from Cyprus, she focused her doctoral work, and her book “The making of a refugee – Children adopting refugee identity in Cyprus” (Praeger, 2002), on exploring how design intersects with the physical, mental, economic, social, and cultural costs associated with displacement for generations. Hadjiyanni’s latest book “The right to home - Exploring how space, culture, and identity intersect with disparities” (Palgrave Macmillan, 2019) features stories from Hmong (mong), Somali, Mexicans, Ojibwe (ojeebwe), and African Americans in Minnesota to explore how elements of interiors support or suppress meaning-making processes, delineating the production of disparities. As founder of Culturally Enriched Communities, Hadjiyanni advocates for built environments that pave the way for social and racial justice and create healthy and connected communities in which everyone can thrive. Hadjiyanni’s award-winning teaching pedagogies have been used to decolonize design education and nurture global citizens.
Setha Low is Distinguished Professor of Environmental Psychology, Geography, Anthropology, and Women’s Studies, and Director of the Public Space Research Group at The Graduate Center, The City University of New York. She received her Ph.D. in cultural anthropology from the University of California, Berkeley. She has been awarded a Getty Fellowship, a NEH fellowship, a Fulbright Senior Fellowship, a Future of Places Fellowship, and a Guggenheim Fellowship for her ethnographic research on public space and social justice in Latin America and the United States. Setha is widely published and internationally recognized and translated for her award-winning books on public space, culture, and human security. Her most recent publications are Spatializing Culture: The Ethnography of Space and Place (2017), Anthropology and the City (2019), and Spaces of Security (with M. Maguire) (2019). Her commitment is to both research and engagement to create a more just and inclusive city.
The Environmental Design Research Association (EDRA) is pleased to announce the recipients of the Certificate of Research Excellence (CORE) for 2020. CORE recognizes rigorous, valuable, and impactful practice-based research that sparks innovation and promotes best practice in environmental design. The credibility of academic research is typically judged on the basis of well-established protocols and peer-review processes – but what constitutes research quality in the context of the practice of environmental design? The tools used to assess academic research do not easily translate to practice-based research, a challenge for researchers and practitioners alike. In response, EDRA developed CORE to serve as a measuring stick to assess the value of research that goes beyond rigor alone. EDRA CORE’s unique evaluation framework identifies practice-based environmental design research that is not only rigorous, but also offers measurable value, meets industry challenges, and advances design thinking; recognizes the importance of research in practice; provides a compass to guide designers, researchers, organizations, and manufacturers; and builds on EDRA’s tradition of inquiry, reflection, and collaboration and its commitment to innovation. The following practice-based design research projects met the CORE criteria and were selected for recognition, based on the review of a cross-disciplinary panel of reviewers consisting of academic researchers, practice-based researchers, designers, and industry thought leaders. The CORE recipients have been recognized during EDRA52, May 16-19, 2021.

2021 EDRA CORE Reviewers
Ada Mestad, Design Anthropologist, HGA Architects & Engineers
Brian Schermer, PhD, AIA, Associate Professor, University of Wisconsin-Milwaukee; Principal, Workshop Architects
Galen Newman, PhD, Associate Professor, Associate Department Head, Landscape Architecture & Urban Planning Texas A&M
Hui Cai, PhD, Associate Professor, Associate Director, Institute of Health and Wellness Design, Kansas University
Sharmin Kader, PhD, Design Research Associate, MTS Engineering & Design
MOBILITY-SUPPORTING REHABILITATION CLINICS: Investigating Barriers and Facilitators to Stroke Inpatients’ Independent Mobility

MERIT CERTIFICATION

Technische Universität Dresden

Study Team: Maja Kevdzija with contributions from Gesine Marquardt, Ruzica Bozovic-Stamenovic, Rüdiger Buschfort, Claus W. Wallesch, Birk Engmann, & Michael Linnebank

Stroke is the most common condition that is treated in neurological rehabilitation clinics in (country) and these facilities remain until this day a greatly unexplored topic from the perspective of architectural design. Since patients live in rehabilitation clinics for several weeks to several months, their examination is essential. Stroke numbers are constantly increasing, making it necessary to refine the design of rehabilitation facilities to improve patients’ well-being and recovery times and reduce the burden on society and caregivers. The scoping literature review conducted at the beginning of the research study suggested that the built environment of rehabilitation facilities is hindering and promotes inactivity, but the impact of the particular elements of the built environment was not explicitly tested. Two studies conducted in different community environments also suggested that stroke patients were avoiding barriers in the built environment and were, as a result, less active compared to the control groups. The evidence-based design knowledge on what hinders and what supports the activity and mobility of stroke patients is, therefore, still greatly lacking and it is needed to design buildings that are contributing to the rehabilitation process. For this reason, patient mobility was taken as the central activity examined in the study for its importance in the recovery process. The main research question guiding this study was: “How does the built environment of rehabilitation clinics hinder or support the independent mobility of stroke patients?” The results of the study were used to develop a catalogue of design recommendations that introduce a new model for rehabilitation buildings: The Transitional Model. The given recommendations are based on the obtained study results and the experience of living in rehabilitation clinics for full 14 weeks. The main goal was to provide directly applicable evidence-based recommendations for mobility supporting clinics and to facilitate the dialogue between different professions involved in the planning process. This study, therefore, aims at contributing to the identified research gap and at informing professionals involved in the process of planning rehabilitation clinics about the importance of EBD research that is not yet well-spread in (country). A mixed methods study including 840 hours of patient shadowing and patient and staff questionnaires in 7 rehabilitation clinics examined the barriers and facilitators to the mobility of stroke patients in the built environment. As the final outcome, a new design concept for rehabilitation clinics was developed based on the study findings.

PRE-OCCUPANCY EVALUATION OF THE OUTPATIENT SPECIALTY CLINICS: A Shift to Team Based Coordinated Care

MERIT CERTIFICATION

HGA

Study Team: Tanya Chadha, Kara Freihofer

Objective of the study: Phase 1 – Pre-occupancy evaluation of the existing clinics Operational efficiency and design are complementary and reciprocal concepts. Planning a new outpatient clinic center requires attention to both. This project aimed to transform a traditional episodic outpatient care clinic into a team-based integrated setting, while enhancing the operational bottom-line and improving patient care delivery through design. The site of the study/project was compromised in both operational processes as well as spatial configuration. Duplication of services across the region created redundancy, prevented optimization of real estate, and at the same time, created inconsistencies in user experience. The objective of this phase of the study was to gather baseline data on the current state of the existing clinics to inform design decision-making in real-time. The project team sought to understand how the existing clinic layouts impacted user satisfaction and operations. The evaluation
aimed to establish a baseline for the existing clinics by identifying inefficiencies and limitations in terms of workflow, operational efficiency, and staff collaboration, and assessing overall satisfaction. Of particular interest were how overall user satisfaction along with staff workflow and patient flow were affected by the current state environment. Research questions for this investigation include: 1. What are the users’ satisfaction toward the clinic, exam room, and workstation design? a. How does this influence overall perception of care? b. How does this influence perceived productivity? 2. What are the staff workflows among the clinic modules? a. Where do they spend their time? b. Where do they communicate? c. How much do they travel? 3. What is the patient flow and throughput? a. Where and how long do patients wait? b. How long do patients consult with care providers? 4. How is the current environment operating and performing? A new replacement facility was being planned needing transformation. A pre-occupancy evaluation study was proposed to understand existing state of the clinics. A mixed methods approach was adopted for the study. Research insights informed design decision-making and led to design interventions hypothesized to support a team-based care delivery model.

DESIGN’S IMPACT ON SENIORS’ PERCEPTIONS OF WELLNESS

MERIT CERTIFICATION

Perkins Eastman

Study Team: Danya Hakky, Emily Chmielewski

In recent years, residents and senior living care providers have begun to focus on whole-person wellness, and have invested in programs and activities that promote activities, socializing, and intellectual growth. At times, these communities find their current spaces cannot support their aspirations for holistic wellness. In response, they invest in capital improvement projects and hire designers to create architecture and interior spaces that encourage and support well-being through the use of various wellness-focused strategies. Little had been done, however, to understand the impact of these wellness-focused design strategies. Accordingly, the study question explored whether design strategies intended to promote wellness among senior living residents did, in fact, positively contribute to residents’ perceptions of their wellness. The study’s design focused on the three dimensions of wellness that could have great impact on residents’ quality of life: physical, social/emotional, and cognitive wellness. The study had three main objectives: 1- Identify the most prevalent wellness-centric design strategies used across three senior living communities for promoting physical, social/emotional, and cognitive wellness. 2- Assess residents’ perceptions of their wellness and how they feel the built environment supports the three aspects of wellness. 3- Share findings and the effective wellness-centric design strategies with the industry as building blocks for more work in and around holistic wellness in senior living. While the study focused on three non-profit senior living communities, the findings and design strategies can have broad application within senior living. The strategies, themselves, are rooted in an understanding of human needs and interactions and can, therefore, allow designers to explore their applicability beyond senior living in areas such as hospitality, healthcare, or even workplace. Although the study was conducted before the COVID-19 pandemic, it highlights some of the reasons older adults choose to move into senior living communities, including the pursuit of an active social life. The study reminds designers and care providers not to lose sight of the value of bringing people together and the positive impact that can have on residents’ perceptions of wellness. This study explored the impact of wellness-centric design strategies on residents’ perceptions of their physical, social/emotional, and cognitive wellness at three senior living communities. The researchers discovered and shared with the industry that the design strategies supported, and in some areas, improved residents’ perceptions of wellness.

FROM TEMPORARY TO TRANSFORMATIVE: Work From Home Insights

MERIT CERTIFICATION

HKS

Study Team: Casey Lindberg, Babak Soleimani, Melissa Hoelting, Upali Nanda

During COVID-19, when our workforce was suddenly forced to work remotely, we were presented with an opportunity to seize upon the disruption and study our effectiveness, health, and well-being. We
conducted this research to identify how the work-from-home experience could inform the future of workplace design. First, we wanted to understand the nuances of how working from home affected people differently based on living conditions and demographics. Were there differences in overall satisfaction based on one’s type of residence? What about the specific environmental conditions our employees worked in? And what about each employee’s social conditions? Did those with children have different health and wellbeing challenges than those who lived without children, and how did those groups differ from those that lived alone? Second, we wanted to dive deep into the work processes that had changed while working away from the office. Did our interactions with those in other offices and cities change in comparison to a time pre-pandemic? What was working just as well, or better, and what was seeming to suffer? Did these perceived changes differ by job description or by rank within the company? Third, we sought to shed light on how employee’s preferences for flexible work experiences were changing. What types of activities and experiences were thought to be done best at the office or away from the office? How many days a week would people prefer to work in the office, and how did that compare to their preference pre-pandemic? Finally, we wanted to understand how working from home will impact what people want from the office when they return, and to identify implications and strategies that can inform flexible work policy and behavior. How can we learn from the above research questions to identify implications and specific aspects for both physical and digital spaces and their associated processes so that the future workplace can be more accessible and resilient?

REIMAGINING KINDERGARTEN: A Mixed-Methods Approach to Test Design Hypotheses In Early Childhood Environments

MERT CERTIFICATION

DLR Group

Study Team: Raechel French, AJ (Anjana) Sivakumar, B. (Bonnie) Sanborn , Marilyn Denison

Utilizing a human-centered research design protocol, this case study compares transitions at a unique, kindergarten center in Washington to a traditional campus in the same district to determine if a shift in design thinking and strategies can reduce transition times and result in recaptured learning time.

The primary objective of the study was to establish that a shift in design strategies can have tangible impacts on the learning experience by recapturing learning time. This study aims, first and foremost, to answer the question (RQ.1) “Does the new ‘expanded push-in’ design (bringing dining and other activity spaces into a ‘neighborhood pod’) reduce overall transition times and increase time spent on meaningful learning and play?” In answering this question, this study validates a fundamental shift in the design of schools from an operations-centric model (where program spaces are grouped by function and type) to a learner-centric model (where program spaces are dispersed the primary learning areas) by demonstrating a quantitative, tangible gain: 45 hours of recaptured learning time. The secondary and tertiary research questions (RQ.2) and (RQ.3) are aimed at better understanding how the campus utilizes the new spaces in the designed school and the qualitative impacts a learner-centric model can have on the kindergarten learners, educators, and school staff. These findings provide further clarity on the drivers behind why educators do and do not use space as well as to better inform future design decisions. Additionally, they provide designers with considerations for refining the design of this type of learning environment in the future.

UNDERSTANDING ART MUSEUM USAGE PATTERNS BY UTILIZING SOCIAL MEDIA DATA

CERTIFICATION

Beijing Jiaotong University¹, Oklahoma State University²

Study Team: ¹Zhongzhong Zeng, ¹Dingyi Liu, ²Bo Zhang

How to use social media data to evaluate the usage of a public building? This project recognizes the characteristics of social media data as an efficient empirical data source, given its abundant quantity (1,573 posts collected, a total of 99,240 words collected for this study), ever-growing number
industry for over a decade. Yet, providers, consumers, payers, and policy makers have resisted widespread adoption, limiting its application and effectiveness in the industry until now. Five years after the original report on the future of outpatient clinic design, we were getting ready for a refresh of our research when COVID-19 struck. Telehealth received a boost when a majority of non-critical care moved to an online platform. During this rapid uptake in telehealth services, we asked ourselves: “What has been the effect of COVID-19 on telehealth and what are the implications for clinic design moving forward?” Through this research we sought to understand the impact of the rapid adoption of telehealth during COVID-19 on the patient and provider experience, predictions for how sustained this change may be, and physician perspectives on the greatest challenges and opportunities for telehealth moving forward. We further investigated how telehealth will impact the physical design of clinic facilities, and the fundamental duality that will drive design as a digital/physical hybrid. To give new insight into physician preferences and perceptions of virtual care, an online survey was conducted with a nationwide panel of 103 family and internal medicine physicians who utilized telehealth to deliver virtual care during the height of the pandemic. Findings informed seven implications for integrating telehealth into clinic design.

RISE OF THE COMMUNITY LEARNING CENTER

CERTIFICATION

TreanorHL Student Life Studio
Midwestern State University, Sam Houston State University, & Texas A&M University (Research Partners)

Study Team: Julie Williams Lawless, Nadia Zhiri, Lisa Lamb, Sharmin Kader

Community Learning Centers (CLC) are designed to fit into a living-learning centered residence hall. The idea for a resident hall-based CLC is built upon the notion that learning happens outside of the classroom from a dynamic environment based on experiences and interactions. At today’s universities, students experience learning in a variety of ways— in and outside of the classroom—and the environs of the campus most effectively respond to these experiences when it provides a variety of spaces in which to accommodate various learning activities. Research indicates that higher education’s emphasis on critical thinking and complex problem-solving in place of memorization of facts drives the need for collaboration and the freedom to access information in different ways, thus changing the
defined environment of studying. Our research goal was to understand if and how the Student Life Studio’s work fit into this changing model for learning. We asked the question: Does the community learning center contribute to student success? We designed our study based on 5 Objectives: 1. Identify how community learning centers contribute to student success. 2. Recognize the attributes of design and program in the CLC influencing student comfort and use. 3. Identify operational successes and challenges. 4. Measure how and why students use the CLC and its features. 5. Recommend areas of improvement for the design and operation of existing CLCs and the design and construction of new facilities.

Design research within architecture practice motivates a firm to be innovative and responsive to client needs and user behaviors. This place-based research on community learning centers sought to prove these spaces work effectively to meet the challenges of campus housing for student success, solidify data-driven construction decisions for universities, and create research-backed design solutions for the student life studio practice. POE study of three community learning centers designed within new residence hall construction used interviews, surveys, and observations to understand how the facility contributes to student success. We evaluated programs, design features, and operations to create a toolkit for university housing designed to promote student success.

A COMPARATIVE ANALYSIS OF VISUALIZATION METHODS IN ARCHITECTURE: Employing Virtual Reality to Support the Decision-Making Process In the AEC Industry

CERTIFICATION

Texas Tech University

Study Team: Ahmed Redha Gheraba, Debajyoti Pati, Marcelo Schmidt, Ali Nejat, Mukaddes Darwish

Architectural projects are unique and complex in nature. The design process of the built environment relies on the collaborative effort of all parties involved in the project. The design team plays an imperative role in conceptualizing design ideas to meet the client needs and objectives. During the design phase, owners, end users, and their representatives are expected to make the most critical design and budgetary decisions—shaping the essential traits of the project, hence emerging the need and necessity to create and integrate mechanisms to support the decision-making process at an early design stage. Important design decisions should not be based on assumptions, past experiences, or imagination.

An example of the numerous problems that are a result of uninformed design decisions are “change orders,” known as the deviation from the original scope of work during or after the construction phase, which leads to an increase of the overall cost, and changes to the construction schedule of the project. The long-term aim of this inquiry is to understand the user’s behavior, and establish evidence-based control measures, which are actions and processes that can be implemented in practice to decrease the volume and frequency of the occurrence of change orders. The current study developed a foundation for further examination by identifying the causes of change orders in design and construction, proposing their potential control measures, and testing the efficiency of the proposed control measures, such as integrating Virtual Reality (VR) as a design visualization method at an early design stage. The specific aim was to examine the effect of different visualization methods (i.e., virtual reality vs. construction drawings) on, (1) how well the subjects understand the information presented about the future/planned environment; (2) the subjects’ perceived confidence in what the future environment will look like; (3) the likelihood of changing the built environment; (4) design review time; and (5) accuracy in reviewing and understanding the design. The current study developed a foundation for further examination by identifying the causes of change orders in design and construction, proposing their potential control measures, and testing the efficiency of the proposed control measures, such as integrating Virtual Reality (VR) as a design visualization method at an early design stage.
The EDRA Great Places Awards are unique among programs that honor professional and scholarly excellence in environmental design. They seek to recognize work that combines expertise in design, research, and practice, and contributes to the creation of dynamic, humane places that engage our attention and imagination. Award-winning projects reflect an interdisciplinary approach that is enduring, human-centered, sustainable, and concerned with the experiential relationship between people and their environment (built and natural) over time. We invite participation from a range of design and research disciplines — particularly projects whose significance extends beyond any one profession or field. All submissions should show how research and/or public participation is linked to—or part of—an environmental design practice, and vice versa. Submissions should also demonstrate how an understanding of the experience of place may be used to generate insightful design.

EDRA’s Great Places Awards seek to recognize work that combines expertise in design, research, and practice, and contributes to the creation of dynamic, humane places that engage our attention and imagination. This year we had 104 International submissions from the US, the UK, Italy, Mexico, Russia, Japan, China, India, New Zealand, and Canada.

2021 EDRA Great Places Awards

Place Art
Emanuele Montibeller, Art Curator, Artesella, Italy
Shannon McMullen, Ph.D., Professor, Purdue University, Co-founder of Critical Gardening
Fabian Winkler, MFA, Professor, Purdue University, Co-founder of Critical Gardening
F. Philip Barash, Fellow, the Boston Foundation

Place Design
Kimberly Dowdell, Principal, HOK in Chicago and 2019-2020 National President of NOMA
Jenny B. Osuldsen, Partner, Snøhetta and Professor in Landscape Architecture, Norwegian University of Life Sciences at Ås
Fabian Winkler, MFA, Professor, Purdue University, Co-founder of Critical Gardening
Suchi Reddy, Founder of Reddymade

Place Planning
Luisa Bravo, Ph.D., Founder and President of City Space Architecture, Founder and Editor in chief, The Journal of Public Space
Rainy Hamilton, Founder, Hamilton Anderson Associates
María Arquero de Alarcón, Founder, MAdE Studio and Associate Professor, Taubman College, Architecture and Urban Planning

Place Research
Wenche Dramstad, Ph.D., Head of Department/Head of Research, Norwegian Institute of Bioeconomy Research
Debajyoti Pati, Ph.D., Professor, Texas Tech University
Upali Nanda, Ph.D., Director of Research, HKS and Professor of Practice, Taubman College of Architecture and Urban Planning

Place Book
Kirk Hamilton, Ph.D., Professor of Health Facility Design, Texas A&M University
Alessandro Melis, Ph.D., Professor of Architecture, University of Portsmouth and curator of the Italian Pavilion, 17th International Biennale of Architecture in Venice 2020
Charlie Hailey, Ph.D., Professor of Architecture, University of Florida
Assembly House is a deeply participatory project using a former church in Buffalo, NY as living workshop, construction training and art installation space. As a creative hub it brings together a diverse group of people - from students and community stakeholders to artists, designers, and architects. Employing strategies of social practice, the project’s components highlight art as both process and product and ultimately as a transformative force in a community. What makes this work so unique are the contributions of its graduates that – with the skills and experiences earned – return to their neighborhoods where they have the expertise to impact conservation, rejuvenation, and change.

**ASSEMBLY HOUSE: A Living Workspace of Social and Material Connections**

**PLACE ART WINNER**

Assembly House 150
Dennis Maher

A community defined by its Latinx residents, El Punto is adjacent to central Salem, MA, but separated by historic stigmatization. Through a sustained program of public art — including large-scale murals, performances, and participatory events — El Punto’s urban fabric is transformed, returning an isolated grid of affordable housing to the mental map of the city and region. As important catalyzer, the open-air museum approach has fostered pride and identity in the community. Jurors agreed that in the context of neighborhood-scale art interventions, El Punto is exemplary. A deeply engaged and socially-aware project, its strategy explicitly connects place-based art to a broader purpose.

**PUNTO URBAN ART MUSEUM**

**PLACE ART HONORABLE MENTION**

Designer North Shore Community Development Coalition
David Valecillos

Architecture Consultant: eco_logic STUDIO and Watts Architecture and Engineering

Collaborators: Quincy Koczka, Lead Builder. SACRA Program, University at Buffalo, School of Architecture and Planning. John Zissovici w/Ethan Davis and Cornell University, AAP. Buffalo Building Trades. Michael Gainer, ReUse Action

Client: Community, City, World


>> Project Credits

Lead Artist/Designer: Mickey Northcutt and David Valecillos, North Shore Community Development Coalition

Collaborators: All contributing artists

Acknowledgements: City of Salem (MA)
Place Design

Place Design awards projects that engage with people and the community, creating opportunities for placemaking and addressing people’s needs. Projects can be new or reuse existing buildings/facilities/areas across various scales. Designs submitted involve places that are meaningful to a community, and consider an issue of social, cultural, or ecological importance.

THE STEPS AT BANDRA
PLACE DESIGN WINNER

Alan and Anca Abraham

The St. Stephen steps project in Bandra is a modest, yet bold, and generous project which the jury simply loved for the strong idea of place making! The total remake of the outworn left-over space is turned into an accessible short cut, open and non-programmed destination in itself. The need of a stair to conquer the large height difference, is cleverly solved introducing landings for vegetation, art and events, steps for seating and short cuts, ramps for accessibility, flow and universal design. The extension of the stair to fill the void in the city, makes a place to gather 24/7, a social hang out spot and a place for everyday and festivals.

DESIGN FOR DISTANCING
PLACE DESIGN HONORABLE MENTION

Neighborhood Design Center
Briony Hynson

Design for Distancing was incredibly well received by the jury as an innovative, replicable and much needed response to a set of challenges that engulfed all of humanity in a very short period of time. The Design for Distancing team responded very quickly to support the Baltimore community as it navigated the on-set of COVID-19, helping residents better orient themselves in a deadly public health crisis. The jury felt that this project serves as a wonderful example of human creativity and resilience in the face of adversity. We applaud the team for their responsiveness and excellence in implementation and the generosity of sharing the ideas.
One thousand trees reclaim this parking into a generous public space for the city. The project brings together a culturally and environmentally grounded approach, attentive to history and offering a diverse spatial and programmatic mix to cater many possible audiences. The transformation of the blocks of parking lots into a people place is significant in providing multiple opportunities for public use. The connectivity of the plazas provides for additional economic investment along each side of the boulevard. The programming and design process were inclusive and open allowing for both public and private investment.

>> Project Credits:

Lead Architects: Nadezda Snigireva (Project Group 8), Roman Kovensky (PARK)

Design Team: Dmitry Smirnov, Ksenia Guznova, Valeria Pestereva, Natalia Tarsukova, Michail Sinyhin, Anastasia Berdnikova, Sergey Murzov

Participatory design process: Nadezda Snigireva

Projectsupervision: Natalia Fishman-Bekmambetova, advisor to the President of the Republic of Tatarstan

Landscape: Park-Service Ltd

Collaborators: Programme for Public Spaces Development of the Republic of Tatarstan, Directorate of Parks and Squares of Kazan, Department of Architecture and Urban Planning of the Kazan Executive Committee, the Executive Committee of Kazan

Client: Main Investing Constructing Administration of the Republic of Tatarstan
Place Research recognizes academic research that considers the relationship between existing or proposed physical form and human activity or experience. Research enriches the understanding of how people interact with places from a behavioral, social, cultural, or ecological perspective; how people experience places; or processes through which places are conceived, designed, occupied, and managed.

GROWING UP WITH NO PLACE TO PLAY: A Participatory Study of Children’s Public Space in Manila’s Resettlement Communities

PLACE RESEARCH WINNER

Urban Design Lab / UO
Lyndsey Deaton

This place research project from Manila focuses on the well-being of children in low-income communities. The work on resettlement social housing has global relevance today, and the project is clear and powerful in its impact and direct link to the UN SDGs. The rigorous research methodology, novelty of the participatory research and visual data analysis approach, and transferability of the findings make it a clear winner for the place research award. The study extends previous work in a meaningful way and has already been recognized by inclusion in high quality publications. It meets the trifecta of rigorous process, clear outcome and meaningful impact.

>> Project Credits:
Lead Architect: Lyndsey Deaton (Urban Design Lab / UO)
Acknowledgements: Save the Children Philippines; Ryoichi Sasakawa Young Leaders Fellowship Fund; the Julie and Rocky Dixon Fellowship

A COMPARATIVE ANALYSIS OF VISUALIZATION METHODS IN ARCHITECTURE: Employing Virtual Reality to Support the Decision-Making Process in the AEC Industry

PLACE RESEARCH HONORABLE MENTION
Ahmed Gheraba

The project has a well-formulated research question. It examines an issue with considerable professional significance, specifically in the areas of improving accuracies in reviewing and understanding architectural drawings by non-design stakeholders in the facility procurement process. The study employs a robust methodology and offers sound interpretations. The findings provide strong empirical evidence to support VR incorporation in the design process, with substantial implications for reducing conflicts and potential reduction in future change orders and accompanying environmental impacts.

>> Project Credits:
Acknowledgements: Dr. Debajyoti Pati
Place Book

Place Book honors books about the experience, design, and understanding of place. Submissions may be about particular places, people’s relationship to place, or about the qualities of place as an area of study. Books may be analytic, descriptive, documentary, or practice-oriented and be published through recognizable publishers.

CASE STUDIES IN RETROFITTING SUBURBIA: Urban Design Strategies for Urgent Challenges

PLACE BOOK WINNER

June Williamson, Ellen Dunham-Jones

The jury was impressed by the range of problem identification and geographic distribution within the extensive list of relevant case studies. This research is a solid follow-up of their previous book and offers indispensable approaches for an interdisciplinary design audience.

>> Project Credits:
Publisher: Wiley Publisher

DESIGNING STREETS FOR KIDS

PLACE BOOK MENTION

Skye Duncan, Anna Siprikova, Annie Peyton, Ankita Chachra, Kat Gowland (NACTO-GDCI)

This companion to the NACTO-GCDI Global Street Design Guide is a well-illustrated set of design principles for planning urban streetscapes for children. It is a relaxed way to present research information in a useful, approachable form well suited to the audience of public decision makers.

>> Project Credits:
Publisher: Island Press
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