Performance Landscapes for Active Youth.

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Performance Landscapes for Active Youth.

Abstract
As a counter-point to the need for researchers using "big data" to engage in complex statistical analyses, here I suggest that big data also opens the door to rich, qualitative analysis. Access to hundreds of hours of video uploaded every minute from 75 countries and 61 languages provides an unprecedented opportunity to delve deeper into how designed environments are interpreted to support social and cultural diversity in cities. The approach follows recommendations by Cushing (2015) for landscape architecture to develop as "a research-oriented profession with broad social relevance." Cushing cites Low (1981), who similarly called for "more socially responsive design" in a paper that responded to the need for a research methodology in landscape architecture to engage at the "individual level".

Disciplines

Comments
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signed as a randomized controlled trial, explores the impact of a temporary outdoor STEM classroom intervention on learning and teaching activities in a selected preschool classrooms.

Children in selected preschool classrooms were randomly assigned into a control group and an experimental group. The experimental group participated in an outdoor classroom sessions. Children in the temporary outdoor classroom participated in a set of STEM learning activities conducted by one classroom teacher and one trained researcher. The control group remained in their regular classroom but take part in the same STEM activities. All STEM activities were carefully chosen undergoing an expert review and discussion with teachers. Data regarding STEM learning and teaching outcomes were measured by direct child observation (active participation in STEM and curiosity about STEM) and teacher interview. Data comparison between groups (experimental and control) and within group (treatment) revealed important findings regarding the effects of outdoor classroom intervention on STEM teaching and learning.

Socially Open Urban Landscapes

Track: Shifting Values
Domain Methods: Health and Active Living, Environmental Justice
Benjamin Shirtcliff, bens@iastate.edu (Iowa State University)

Socially Open Urban Landscapes (SOUL) is an exciting new approach to understanding the relationship between urban design and public life in cities through play. Play is a fundamental human trait that crosses gender, age, racial, ethnic, and cultural lines; and, represents a critical point of departure for creating cities that support heterogeneous social interactions. Access to streets, parks, plazas, and open space is an important part of maintaining a healthy lifestyle in cities. Participation in public places is key to developing competencies as citizens and sustainable development of cities. By focusing on adolescents’ right to the city, I have identified barriers (social, political, and physical) that limit their access to places to achieve healthy, positive outcomes. Unfortunately, failing to support youth needs contributes to a burgeoning public health concern with a range of minor health and wellbeing problems that originate in youth and result in a whole host of problems magnified in adulthood. This sets up adolescents with persistent problems across the lifetime. Urban designers improve existing conditions—social, natural, and physical—to create places that encourage access and positive participation in public space. Through SOUL, I will show how big data from Social media, like Instagram, YouTube, and Twitter, Opens access to new evidence of the Urban play of adolescents across multiple Landscapes. The presentation will identify how several different types of public locations in multiple cities already serve to support play behaviors for adolescents. The presentation will introduce participants to: daily environmental justice issues facing adolescents in cities; examples of their type of play from social media; advantages of urban design strategies that supports their play for sustaining healthy, urban environments; and, the challenges of incorporating play due to policy, zoning, and design constraints.

Performance Landscapes for Active Youth

Track: Shifting Methods
Domain Methods: Research Methods, Big Data
Benjamin Shirtcliff, bens@iastate.edu (Iowa State University)

As a counter-point to the need for researchers using “big data” to engage in complex statistical analyses, here I suggest that big data also opens the door to rich, qualitative analysis. Access to hundreds of hours of video uploaded every minute from 75 countries and 61 languages provides an unprecedented opportunity to delve deeper into how designed environments are interpreted.
to support social and cultural diversity in cities. The approach follows recommendations by Cushing (2015) for landscape architecture to develop as "a research-oriented profession with broad social relevance." Cushing cites Low (1981), who similarly called for "more socially responsive design" in a paper that responded to the need for a research methodology in landscape architecture to engage at the "individual level". In addition to the methods and measures suggested by Cushing, Low and others (cf. Deming, Zeisel), I propose that another means of exploring how design supports cultural diversity at the individual level is through publically posted videos and other social media. By turning urban environments into a stage to support social performances, people play in local, public place for a global audience. I contend that such interpretations are an example of the success of public space and urban design to support social and cultural diversity. During the presentation I will show how the assessment of adolescent performance in-place will fill a current void in understanding unstructured adolescent activity in public space. By conducting research using big data—YouTube and online videos—I will identify how landscapes across multiple cities support positive behavioral outcomes for active youth. I suggest that the inclusion of social media as a research method will help researchers interested in addressing inadequate design policy and practice with highly generalizable findings.

Landscape Manipulatives: A Study of Mathematics Gardens and Learning Outcomes

Track: Shifting Methods
Domain Methods: Childrens Environment, School and Education Environments

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Human beings, especially children, need natural environments and outdoor play for their physical, mental, and spiritual well-being. Even though parents and teachers recognize the value of outdoor play, schoolchildren spend a diminishing amount of time engaging in outdoor activities. Furthermore, addressing strict state learning standards is often the first priority for schools. This makes outdoor activities seem extracurricular to those subjects typically emphasized and tested. This raises the question: how can outdoor learning environments support, even enhance, student learning outcomes on standardized tests?

This study uses several methods to address the research question. First, current research in environment-based education (EBE), constructivism, and other relevant learning theories was synthesized into an analytic framework called landscape manipulatives (LM). A landscape manipulative is an experiential, outdoor behavioral setting that provides students with opportunities for hands-on learning, ownership, and play. Second, a prototype landscape manipulative called a math garden, based upon the LM framework, was designed and built on a middle school campus. The prototype focuses on mathematics since many students tend to underperform in math even though it is routinely the subject of standardized tests. Third, the math garden was tested using a quasi-experimental approach that includes randomized pre-testing and post-testing with a time series design. Additionally, surveys and diaries were used to monitor learner motivation. The study's hypothesis is that students exposed to the math garden will perform better on standardized tests than those students who rely only on classroom instruction.

The study's goal is to show how landscape manipulatives, specifically math manipulatives, can shift the methods and values typically associated with K-12 education, even enhancing learning outcomes on standardized tests. If successful, the LM framework will help environmental designers and educators create learning landscapes that are essential counterparts to traditional pedagogic approaches while exposing students to the benefits of nature.