Contents

Theme Issue: Shaping the Future of Learning Environments: Emerging Paradigms and Best Practices

NEXT ISSUE: DESIGNING EDIBLE LANDSCAPES (DEL)
Guest Editor: Vikram Bhatt, McGill University, Minimum Cost Housing Group, School of Architecture, Montreal, Canada.

Editorial

A BRIGHT FUTURE FOR CREATING ENVIRONMENTS CONDUCIVE TO LEARNING

Whether in school buildings or university campuses the educational process involves many activities that include knowledge acquisition and assimilation, testing students' motivation and academic performance, and faculty and teachers' productivity. The way in which we approach the planning, design, and our overall perception of learning environments makes powerful statements about how we view education; how educational buildings are designed tells us much about how teaching and learning activities occur. Concomitantly, how these activities are accommodated in a responsive educational environment is a critical issue that deserves special attention. While it was said several decades ago that a good teacher can teach anywhere, a growing body of knowledge-derived from knowledge on "evidence-based design" suggests a direct correlation between the physical aspects of the learning environment, teaching processes, and learning outcomes. In its commitment to introduce timely and pressing issues on built environment research, Open House International presents this special edition to debate and reflect on current discourses on sustainable learning environments.

As a guest editor of this edition, my personal interest, acquaintance, and experience of learning environments come primarily from working with Henry Sanoff in the early nineties on a research project-funded by the National Endowment for the Arts and conducted at the School of Architecture at North Carolina State University-addressing environments for young children, in which a number of collaborative mechanisms for understanding and anatomizing the learning environment are developed, while exploring the wide of variety of needs and interests that are mandated by different user types (Sanoff, 1994, 1995, 2002). Such an experience was enhanced by my involvement with Adams Group Architects in Charlotte, North Carolina in a research and consultancy capacity during the period between 2001 and 2004 (Salama and Adams 2003 a. and b., Salama, 2004, Salama, 2007). Several strategic planning projects, pre-design studies, and participatory programming and design were developed for schools in North Carolina.

A worldwide commitment to designing responsive environments conducive to learning is witnessed in many academic settings. This is evident in a recent colloquium conducted by Colloquia of Lausanne, Switzerland, and in the recent efforts by recent practices in both developing and developed countries (Knapp, Noschis, and Pasalar, 2007). Notably, in many schools of architecture the subject is being debated through research and design where future generations of architects are exploring possibilities of shaping the future of learning environments. An important example among many others is the studio project undertaken at the Post Graduate Level at Queen's University Belfast and coordinated by Alan M. Jones. In this project and through designing a context-based high school in Belfast, students are developing a deeper insight into the understanding of sustainable design parameters including lighting experience and the distinctive characteristics of the spatial environment and its impact on learning.

The trans-disciplinary nature of contemporary architectural knowledge and its epistemological foundations is now palpable in most architectural discourses. Discussing and debating learning environments is no exception. The papers of this issue manifest the trans-disciplinary paradigm where knowledge about learning environments crosses the boundaries of disciplines including pedagogy, psychology, behavioral sciences, planning, and design. Remarkably, reference to the work of scientists and education theorists is so obvious in the work presented (Dewey, 1916, 1933; Friere, 1971; Kolb, 1976, 1981, Kolb and Kolb 2005; Gardner, 1983; Edwards and Usher, 2001; and Stevenson, 2008).

The twelve papers included in this issue explore and investigate qualities and characteristics of learning environments at different scales and in different contexts, from classroom typologies to campus outdoor spaces. They place emphasis on emerging paradigms in learning environments that involve a number of underlying issues including the academic house clustering, the school as heart of the community, the rising interest in new classroom spaces and forms, the user-centered processes, utilizing the learning environment as an open textbook, and the impact of recent advances in information technologies and globalization on the future of learning settings.

Categorizing the papers, it is noted that five papers focus on learning settings in schools and the processes by which those setting are created, while four papers introduce human centered issues that pertain to university campuses, exemplified by users' perception, socio-cultural norms, and behavioral factors. On the other hand, three papers focus on the spatial environment of the design studio as a unique place for making design decisions. Shared among most papers in this issue are two important aspects, collaboration in planning and design decision making and a continu-

ous focus on the users of the learning environment whether in design, evaluation, or the actual use.

In his paper Research-Based Design of an Elementary School based on his over thirty years of dedication to collaborative and community design, Henry Sanoff introduces an important recent case. He examines learning and teaching styles in a collaborative process that encompasses participatory pre-design, selection of alternatives based on learning and teaching approaches, and post occupancy evaluation. This is a form of evidence-based design, where students, teachers, and parents participate with the design team in making decisions about their future school. Such a collaborative process resulted in a new innovative approach to designing the learning environment including an "L" shape classroom, outdoor classrooms, the academic house and courtyard concepts. An ethical approach showing the commitment of the design team to explore the results of their collaborative process is envisioned through a post occupancy evaluation study.

Strikingly, many of the features included in Henry Sanoff's approach are debated in other papers within this issue. The ideas of academic house and courtyard to promote ecological awareness are elaborated in the work of Clare Newton, Sue Wilks and Dominique Hes. Their paper places emphasis on the fact that schools are complex systems and therefore argue for conceiving them as teaching tools. Newton, Wilks, and Hes base their work on three elements that include spaces that support effective learning, the role of the building in achieving sustainability, and the pedagogies and practices by which the first two are achieved.

The work of Ashraf Salama builds on Sanoff's collaborative approach and examines the learning environment in both research and design processes. This is based on Salama's involvement with Sanoff and the Adams Groups Architects in working with the school community to identify their needs, wants and aspirations, while exploring the pedagogical aspects by which their targets are met. The results of his investigation support the assumption on how the school environment has a direct impact on the way in which teaching and learning takes place. He concludes with an argument discoursing the need for going beyond adopting prescriptive measures to address the quality of the learning environment; this is conceived by highlighting the need to utilize knowledge generated from research findings into school design process, to pursue active roles in sensitizing users about the value of the school environment in reaching the desired academic performance while increasing teachers' productivity.

The collaborative approach is evident in the work of Iris Aravot. In her paper, she introduces an argument for creating learning environments that are context-based and locally focused, signifying identity, belonging and wellbeing. In a poetic yet critical analysis, she proposes an approach to the creation of learning environments through the intertwining of topographies - the owned and continual space of everyday life and dwelling; shrines - the spaces for the new, the exalted, the non habitual; and making by the community - the continual collaboration of the community in the design and re-design of their learning environment. It is noted that Aravot utilizes a phenomenological approach drawing from a body of knowledge generated from a wide spectrum of theoretical and scientific sources coupled with her experience as a designer.

Based on the work of an interdisciplinary team, Pamela Harwood presents ten patterns underlying crucial imperatives and principles for designing learning environments. However, a focus on Charter schools is the major driver of her work. Harwood's team involved students in architecture, urban planning, business, education, and psychology. The focus on Charter schools within the United States is based on the fact that they have innovative curriculum, administrative and pedagogical autonomy, while challenging traditional methods adopted by public education. Addressing the connections between the designed physical environment and the learning innovations it supports, this work fosters the vision and mission of Charter schools. It emphasizes a considerable number of sustainable design parameters that include renovation, adaptive reuse, and non-traditional use of existing buildings, efficiently maximizing student safety and learning, and adhering to best-practice standards of ecological design.

At different scales university learning settings are addressed in the works of Joy Potthoff, Yasser Mahgoub, Susan Whitmer, and Ashraf Salama. Based on an intensive post occupancy evaluation process, Potthoff presents an assessment study that examines faculty and student satisfaction with classrooms in a recently built university building. While the satisfaction level of both faculty and students were high, concerns were expressed in terms of comfort levels and room temperature, equipment use, and controlling the indoor environment.

Three studies related to the larger context of the university environment are covered. Yasser Mahgoub utilizes the case of the New Kuwait University City to demonstrate the way in which socio-cultural requirements impact campus design. The premise in the context of Mahgoub's work is that addressing socio-cultural factors does

not necessarily go along the development of ecological based sustainable environment. He focuses on two major factors that support such a premise: separation of students' sexes and car parking requirements, and presents them as challenging aspects for achieving the minimum level of sustainability.

In his exploration of the issue of good design intentions versus users' reactions, Ashraf Salama introduces a multilayered methodology for the assessment of the performance of Qatar University campus outdoor spaces from users' perspective. Such a methodology involves walk-through evaluations and direct observation, behavioral mapping, and survey questionnaires. He juxtaposes the statements made by the architect and the results of his assessment which reveals several contradictions between the "good intentions" and users' responses. He concludes that by recognizing how well university campus outdoor spaces respond to the needs of faculty, students, and staff, it is possible to recommend mechanisms for improving the outdoor environment necessary to facilitate the work and learning experiences of different users within the campus and the desired student-faculty interaction.

In a completely different context, Susan Whitmer examines the role of place in three university campuses in the United States as it relates to students with learning disabilities. Focusing on three important elements fundamental to successful learning environments, Whitmer places emphasis on wayfinding, formal learning spaces, and disability learning spaces. Her research concludes by arguing for the crucial need for going beyond addressing the minimum planning and design standards, while effectively incorporating universal design principles.

The three papers that focus on the learning settings of the architectural design studio present good examples that relate learning in architecture to the timely issues of experiential learning, information technologies, and globalization. Adopting the experiential learning model introduced to the world of pedagogy by David Kolb, Pedro Serrano Rodríguez and Luis Felipe González Böhme explore the use of outdoor workspaces as catalysts for generating and testing design ideas. They base their work on the typical norm of disassociating indoor and outdoor learning experiences. Presenting cases from the experimental studios they are currently undertaking at the Universidad Técnica Federico Santa María in Chile, Rodriguez and Böhme argue for an effective incorporation of outdoor learning which is integral to a studio culture.

Juxtaposing the physical environment with advances in telecommunication technologies, Burcu Senyapili and Ahmet Fatih Karakaya investigate the impact of virtual learning environments on the future typology of studio settings. Based on their investigation, Senyapili and Karakaya propose the use of a hybrid setting for the future setting of studio environment predicting that such a setting will be a learning environment that integrates the physical and the virtual worlds. In a different but related juxtaposition, Michael Jenson argues and debates the issue of globalization through the studio environment. He introduces the notion of learning across the boundaries of cultures and regions, exploring the concept of de-territorialization to emphasize that within this concept, cultural spaces are not necessarily bound to geographical areas. What is juxtaposed in this context is the global versus the local. Taking the discourse further Jenson argues that the old lecture hall and studio configuration must together manifest the new learning environments.

While exhibiting different types of commitment to the creation of responsive and inclusive learning environments amenable to creativity and innovation, the twelve papers advance the discussion on the characteristics and parameters of the future of learning environments while at the same time paves the road to continuously questioning norms and practices that ultimately foster the creation of environments conducive to learning.

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Ashraf M. Salama
SPACE-School of Planning, Architecture, and Civil Engineering
Queen's University Belfast
Northern Ireland, United Kingdom
a.salama@qub.ac.uk