# **Building Bridges**

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This special issue of **HERD** includes five papers that were presented at a research day organized by the three technical universities in the Netherlands. This small-Karin Tanja-Dijkstra, PhD scale research day took

place on May 26th, 2009, in Rotterdam; it was entitled "Innovation in Design and Management of Healthcare Facilities and Healthy Environments." Researchers from different fields such as architecture, real estate and construction management, psychology, and engineering participated in this multidisciplinary event.

The research day opened with a talk by Marinus Verweij, from the Dutch Centre for Health Assets, who spoke about health assets in a changing context and discussed a business case. Next, Professor David Allison from Clemson Univer-

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sity discussed the topic of integrating design and research with education, practice, and the healthcare industry. During the day, 16 research papers were presented in parallel sessions. The day closed with a panel discussion that included representatives of the three universities who were joined by David Allison, representing the fourth university that actively participated in the research day.

In addition to the scientific output, which you can read about in the different articles in this issue, this research day taught me some valuable lessons that I would like to share with you in this editorial. These lessons can be summarized by the title of this editorial, "Building Bridges"—bridges between continents, bridges between domains, and bridges between researchers and practitioners. It is evident that there is a variety of initiatives being employed at the moment to build these bridges, but I think they should receive appropriate attention in the near future.

### Europe - USA

During the research day, we had the pleasure of welcoming several researchers from Clemson University. The importance and relevance of discussing research across the borders of our own

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continents should go without saying; at least this is the way the scientific community in most domains functions. However, in the fascinating domain of health environments research, I noticed that this is not always the case; this was also mentioned to me several times at the most recent Healthcare Design conference last November in Orlando, Florida.

The organization of healthcare in the United States and most European countries is quite different. This automatically leads to differences in defining the most relevant research issues. However, despite such differences, much that is being researched these days on both continents could benefit from the insights of the other. I feel that this can be taken one step further to help the field progress more quickly. The field would greatly benefit not only from awareness of ongoing research, but by actually working together on some of the most pressing issues. There are strong research partners available on both continents, and research collaborations are being formed at this moment. Building bridges between these partners and combining their collaborations could inspire new ideas and lead to fascinating research. And by no means should such bridges be limited to Europe and the United States; other parts of the world are dealing with identical issues.

#### **Bridges Between Domains**

The field of health environments research is driven by solving actual problems in society, which almost necessarily makes it an interdisciplinary field. Contributions from a variety of research disciplines are necessary to solve these problems. However, merely contributing is not enough; the various disciplines should be working together to generate solutions.

Currently, most of the research conducted in this field is mono-disciplinary. Researchers are looking at issues from, for example, an architect's or psychologist's point of view. This is the case even when formulating new research questions; often one takes notice of research insights only from one's own field. In several literature reviews published in the last couple of years, some researchers undertook the effort to look beyond their own domains. In an editorial for this journal, Kirk Hamilton emphasizes the fact that evidence can be found in many domains.

Thus, the first step would be to take notice of work from other disciplines. But to solve the actual problems facing healthcare today, it is necessary to work in teams that are truly interdisciplinary in nature. This can be extremely challenging. But when researchers learn from each other's approaches and methods and actually start working together to try to solve problems, the field can really benefit from these efforts.

### Bridge Between Academia and Practitioners

A third bridge that can develop a stronger foundation is the one between researchers and practitioners—one of the explicit goals of HERD. We welcomed several practitioners at our research day, and although they are extremely interested in the work that is being done, it is not always applicable to their daily practice. As with the bridges to be built across disciplines, it is not enough simply to acknowledge each other's work. It is evident that researchers should communicate the findings of their studies to the practitioners who can use this knowledge to realize, for example, new healthcare facilities. However, when researchers team up with practitioners at the beginning of projects, they can benefit from some very specific knowledge of which they might otherwise be unaware. This kind of participatory research project could contribute to solutions that people in the field can actually use.

In sum, working on (1) international, (2) interdisciplinary, and (3) participatory projects will generate research that contributes to solving some of the most relevant issues the healthcare industry currently faces.

#### This Issue of HERD

The articles in this issue all contribute to building the bridges described above. Based on the scores generated by two reviewers in a peer-review process, the five best papers of the research day were selected for publication in this special issue of HERD. In addition to academic criteria regarding scientific content, relevance, and quality, the reviewers also indicated to what extent the paper would contribute to presenting an overview of the research day. The combination of this rating and judgment regarding scientific quality led to the selection of the following five papers:

- 1. "Developing a Usability Evaluation Tool To Assess the Patient Bathroom." This paper uses a technique from a different research field—heuristic evaluation—to gain insight into identifying usability issues in a patient bathroom. The research in this paper resulted in an evaluation tool to assess hospital bathrooms during the design process.
- "Knowledge Modeling Tool for Evidence-Based Design." This paper aimed to take evidence-based design (EBD) to the next level by providing a framework for a performance-based measurement tool that can provide support during the design or evaluation of healthcare environments. The proposed model can deal with the complexities of EBD knowledge.
- "Private Investments in Hospitals: A Comparison of Three Healthcare Systems and Possible Implications for Real Estate Strategies." This article focuses on three different healthcare systems and discusses the cost, financing, and design innovations associated with each. It demonstrates that less governmental involvement affords both opportunities and risks for hospitals.
- "The Effects of Nature Images on Pain in a Simulated Hospital Patient Room." These articles employ an experimental approach to

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- study which types of nature images are most therapeutic. The images were categorized based on Appleton's Prospect Refuge Theory. The mixed-prospect and refuge image shows a significant potential to reduce sensory pain.
- 5. "Directions in Healthcare Research: Pointers From Retailing and Services Marketing." This paper looks at evidence from other domains, namely retailing and services marketing, to explore insights and findings that could be of interest in a healthcare context. Both environmental (music and scent) and social environmental (crowded conditions) factors are included in this literature review.

I hope you will enjoy reading these articles, which approach the issue of designing effective health-care environments from a variety of perspectives. Moreover, organizing a small-scale research day with participants from different backgrounds can be very inspiring; I would definitely recommend that you do so in your own country.

#### Note

 The paper originally submitted by Vincent and colleagues was subsequently made into two articles at the suggestion of reviewers.