Edited Collection

Re: Research

Edited by
Gjoko Muratovski and Craig Vogel

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Teaching and Learning Design

Volume 02
Philosophical Frameworks and Design Processes

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Design and the Creation of Social Value

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Volume 1:
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Acknowledgments and Thanks

This book is a by-product of the *Re: Research – 2017 International Association of Societies of Design Research* (*IASDR*) *Conference*. We are extremely grateful to have had the opportunity both of us to co-chair and host this important international conference at The Myron E. Ullman, Jr. School of Design, in the College of Design, Architecture, Art, and Planning (DAAP), University of Cincinnati. We thank the IASDR board for choosing us as the first University in the USA to host this conference. We also want to acknowledge and thank all the individuals who participated in this conference and contributed to its success.

Foreword

Design research in the United States is still an emerging aspect of design practice and education. While designers have been conducting research during the second half of the last century, two key dimensions have only recently developed and matured. The first aspect is the ability to develop better research methods in Masters and PhD programs. The second is the development of research journals. In addition, designers are working with other disciplines allowing them to co-publish in other professional journals. The IASDR conference was built on three key themes: design research in practice, in education, and co-developed research conducted with a combination of practice and education. Gjoko Muratovski reviewed the papers for the conference and further divided the submittals into several topic areas. His list illustrates the expansion and hybridization of design. Translational research and observational research have always been a core strength of the fields such as Industrial Design and Graphic Design. Translational and observational research have always embedded in projects and have been primarily conducted using qualitative methods. Since design programs lacked (post)graduate and PhD level of education, these research methods were rarely evaluated and described in publications. The focus on quantitative methods in the related fields of engineering, computer science, and business with PhD-level research and significant government and corporate funding allows for these methods to have a clear representation in practice and education.

As design fields continue to evolve there are a number of choices that must be made. The first challenge is understanding how design practice can embrace and evaluate traditional methods of design including visualization, observational methods, and translational ability. In order for designers to do this research, the field of design must develop protocols to determine how to evaluate and articulate these abilities and communicate them effectively in recognized publications. The second challenge is to understand how to integrate quantitative methods into design process. This process would be best accomplished by teaming with other fields as a part of an interdisciplinary collaborative effort. In addition, as more professionals and graduates of non-design disciplines are enrolling in Masters and PhD programs in design, we are increasingly seeing a new hybrid of researchers who often bring quantitative methods into the various subdisciplines of design. Also, as design thinking continues to be of interest to non-design disciplines, there is a need to capture and agree on what are the attributes of design that are of interest to other disciplines. There are three levels of design thinking that have emerged: design literacy, design integration, and design mastery. In most cases, design thinking exposure teaches non-designers how to approach problems with an open approach and to practice the observation and visualization methods to structure understanding of opportunities. What is not as well explained or delivered is how designers translate insight into solutions. There are examples of non-designers mastering this level of design, but this takes time to learn and cannot be delivered in a 3–5-day sessions.

Another aspect of design that has been evolving for several decades is the ability to grow horizontally in to other fields and vertically from object and image to planning and strategy. The research in this area has unlimited potential.

It also creates challenges for design education to decide how to prepare graduate and undergraduate students for practice. Design education has excelled in the teaching of executable methods to produce solutions. Research has played a role in this process. Graduate programs can focus primarily on research methods or find a balance at a different level between research and executable approaches providing more time to define the boundaries of an opportunity prior to starting to focus on ideation and solution. PhD programs in design must find a unique voice in the articulation of history, theory, and criticism to compliment and differentiate the role of doctoral research from other related and established fields. The challenge will always be to maintain a balance between the general and particular aspects of design.

The most exciting aspect of design that I have been a part of for the last 30 years has been the ability to work with other disciplines and mastering the coaching of interdisciplinary student teams to produce a unique insight into opportunities. This work has been with range of companies and influenced practice with the ability to produce books and papers and teach workshops and courses. Recently, I have been part of a relationship that connects design students and faculty to the opportunities in area of patient centered and empathic healthcare through one of our affiliated organizations – The Live Well Collaborative. The design-led research approach of this organization has been integrated into the research protocols of the Cincinnati Children's Hospital. Our design students, led by our faculty, have been able to effectively interact with all stakeholders at the Children's Hospital to effectively respond to over 20 design research opportunities. Each project is predefined to measure outcomes in clinical application. The model has been evolving over the past decade and was built on a similar model developed previously at Carnegie Mellon University. This is just one of the several examples of how this is occurring at the University of Cincinnati and at design programs across the United States. The challenge that we still face is that we need to effectively communicate our success as a field more broadly within universities, as well as corporations, the government, and the society at large. Achieving the full potential of the existing and the emerging fields of design can only be accomplished through design research and its dissemination in appropriate publications.

Craig Vogel

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Introduction to Re:Research

The Oxford Dictionary defines research as a "systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions." However, to many people, the word research connotes some kind of mystique and it suggests an activity that is somehow exclusive and removed from everyday life and from practice. Defining research in a context of design can be even more problematic. A discipline such as design is inevitably faced with many (often conflicting) ideas and philosophies. Most people are unsure what design researchers do, why they conduct research, what is the purpose and the benefit of their research, and how research contributes to people's overall quality of life and general welfare. Nevertheless, the field of design research has continued to grow and mature.

For many university-based design programs, research has become the norm. New research-driven Masters and PhD programs in Design continue to be introduced, and in some cases such as at The Myron E. Ullman, Jr. School of Design, research is becoming increasingly embedded in the undergraduate design programs as well. An increasing numbers of design research societies from around the world are steadily emerging as well, and the *International Association of Societies of Design Research* (IASDR) has played an instrumental role in fostering this. In an American context, however, the most influential role in introducing research into the field of design is played by industry. In their endless pursuit of innovation, impact, and profits, corporations increasingly require their designers to use research data in order to minimize their investment risk and work with a higher degree of accountability and rigor. For many designers today, both in academia and industry, evidence-based research is not only seen as an asset, but also a requirement for career advancement.

DESIGN RESEARCH NOW

Just as the term "design" has been going through change, growth and expansion of meaning, and interpretation in practice and education – the same can be said for design research. The traditional boundaries of design are dissolving and connections are being established with other fields at an exponential rate. Based on the proceedings from the IASDR 2017 Conference, which has been held for the first time in North America, *Re: Research* is an edited book collection that showcases a curated selection of 83 papers – just over half of the works presented at the conference. With topics ranging from the introduction of design in the primary education sector to designing information for Artificial Intelligence systems, this book collection demonstrates the diverse perspectives of design and design research. By dividing the book broadly into seven thematic volumes, we have made an attempt to map out a general pattern of where the field of design research is now.

In this regard, this book serves as a snapshot of time. It shows how far the current conversation in design research has gone so far, what the field finds to be relevant today, what kind of topics of interest have emerged, and in what areas design researchers are currently working on. This is by no means a definite account of the field, but nevertheless, an interesting indicator of the current state of things. The volumes are the following:

Volume 1: Teaching and Learning Design
Volume 2: Philosophical Frameworks and Design Processes
Volume 3: Design and the Creation of Social Value
Volume 4: Design and Living Well
Volume 5: Design Discourse on Culture and Society
Volume 6: Design Discourse on Business and Industry
Volume 7: Design and Digital Interaction

CLOSING WORDS

The papers have been edited for copy purposes, but not for content; so that the voice and writing style of each of the authors is as authentic as possible. We have done this in the effort to support the idea that our field is broad and diverse and that there are many different ways in which design researchers express themselves and disseminate their studies. We hope that you will enjoy reading the papers presented here and that this book collection will serve you as a good resource in your future work.

Gjoko Muratovski