Synthesis Lectures on
Information Concepts, Retrieval, and Services

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Heather O'Brien

User Engagement Research and Practice

Springer

Synthesis Lectures on Information Concepts, Retrieval, and Services

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For Elaine, who started the user engagement journey with me. Happy retirement.

And for Silas and Paul, who keep me going and remind me what matters most.

Preface

I have been studying user engagement for the past 20 years. It has always been a slippery concept. Early in my research, people asked me how I would possibly define and measure user engagement, and how to design engaging systems. During those early years, I sought a "solution" to the engagement challenge. I wanted to craft a single definition and a measurement instrument that could be used in multiple settings to evaluate engaging outcomes. I have had some success with these aims, but my quest for a universal way of thinking about, measuring, and designing for engagement has shifted.

Today, if I am asked how to define, measure and design for user engagement, I will tell you "It depends." It depends on the context in which we are studying engagement (Is it health, gaming, searching?), the people we are designing for (Are they tech savvy? What are they trying to accomplish?), and what interactive possibilities are afforded by the technology (How does it enable content consumption or creation, or connecting and communicating with others?).

Why the change? Over time, I have become more comfortable with uncertainty and hopefully wiser about the limits of binary thinking. I have also gained terrific insights from working with other researchers and practitioners. These collaborations have stretched disciplines, and the projects have had different goals (e.g., build a high-quality app to support quality of life outcomes, increase equitable access to information) and have used different methods, ranging from qualitative interviewing and participatory methods to experimental studies and surveys.

While I, as a scholar, have moved away from a universal way of understanding engagement, it feels as though the rest of the world is running toward it. When we hear "user engagement" in today's dynamic technology landscape, our thoughts go to getting and keeping people's attention and maximizing time on a device or application and the usage metrics that are proxies for that attention. Thus, user engagement has come to be defined as a metric rather than an experience, and, in many digital spaces, it is a profit driver rather than a pathway to meaningful outcomes for technology users.

The goal of this book is to promote a more holistic way of thinking about user engagement. In the following chapters, I provide the reader with multiple definitions, theoretical frameworks, methodological approaches, and examples of research studies that describe user engagement in different settings and with different digital information systems. I also consider some of the broader influences on user engagement of emerging technologies. Realizing this goal has been a tall order.

Like many technology-related topics, user engagement has exploded over the past 20 years. It is studied in engineering, computer science, library and information science, communications, media studies, psychology, education and health. Industry and academic authors write about measuring and designing for engagement, and technologies of interest range in focus (e.g., learning, searching, gaming, entertainment, health) and format (apps, haptics, virtual and augmented reality).

It is no longer possible to comprehensively review the literature on user engagement. In preparation for writing this manuscript, two distinct literature reviews were conducted. Both used academic databases in library and information studies, communications, computer science and other cognate fields, with additional hand searching and forward/backward chaining of key works. First, as part of an independent study course, Kin Man Leung (former UBC MLIS student) conducted a systematic review of methods and measures used in user engagement research. She discovered over 800 papers published between 2010 and 2022! Since the book covers more than methods and measures, I conducted a second literature review that broadened the scope but reduced the date parameters (2016–2023); this retrieved over 500 items. I have continued to keep my eyes open for emerging research as I have been writing these chapters. Despite the large volume of studies retrieved in my searches, there are countless studies that are not included because they are conducted by industry and not published.

Given that an exhaustive synthesis was not possible, I have been strategic about what to include and exclude. Since there are two previous works on user engagement (*Measuring User Engagement* by Lalmas, O'Brien and Yom-Tov, 2014; *Why Engagement Matters* edited by O'Brien and Cairns, 2016), I leaned into more recent works (2016–present) in this publication. However, as a former librarian, I always encourage people to go to the original sources and honor early contributors to a research space. So, I have gone back in time when I felt it was needed, such as explaining the origins of engagement and its theoretical underpinnings. Adding to the issue of volume, information interactions are threaded throughout all digital environments. This raised scope issues for the current work and forced some challenging decisions about what domains to include. In the end, the reader will have a healthy bibliography on user engagement with digital information systems and can branch off into specific subject areas like health and education depending on their needs.

User engagement research is rapidly changing because our world and our technologies are rapidly changing. Maybe we will need a new synthesis lecture in a year, maybe five? For now, this is a snapshot of where we are and, upon solid reflection, where we might strive to go.

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