

BOOK REVIEW

Lucy Green, *Book Review Editor*

***Learning Theory and Online Technologies,* by Linda Harasim**

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Linda Harasim's fifth book, *Learning Theory and Online Technologies*, continues along the trajectory of her research and teaching interests: how educators and trainers can effectively and innovatively use technology to engage learners within an online environment. Her prior books, many journal articles, and chapters focused on networked and online learning strategies and pedagogies. Hailing from Canada, Harasim has collaborated with educational researchers on other continents, grounding her argument for a paradigm shift and the need for a 21st century pedagogy and theoretical framework within the findings of research studies in various countries.

Learning Theory and Online Technologies is designed to serve as a textbook for undergraduate and graduate level courses in education and communications programs. The tone and flow make the book's content accessible

to most students. Students with limited English competency and who are not experienced in reading on international trends in educational technology use and research may recognize the benefit of investigating the ideas and sources, which are introduced in support of Harasim's argument. The glossary is quite thorough for grasping key ideas shared in the books. With the increasing presence of international students in educational technology programs and some students' tendency to capture new details in shorter sound bites, the glossary serves as a starting point for additional investigation into the trends, concepts, and research studies described in various chapters. Encouragement of (online or face-to-face) collaborative learning, as Harasim posits, would be one strategy so students understand the full scope and impact of these trends and concepts, to understand how to

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effectively manage the benefits of online technologies.

The book is divided into 10 chapters. Its first five chapters provide readers/students a well-defined trajectory of the development of learning theories supporting empowering technology integration. Chapters 6 through 9 offer readers an explanation and examples of how online collaborative learning theory (OCL) responds to 21st century requirements and shifting paradigms of instruction and scientific analysis. Chapter 10 can serve as an overview of the concepts discussed in the prior chapters, concluding with four potential directions in which digital technology is to be employed to advance the paradigm shift Harasim describes in this book.

In Chapter 1 of this book, Harasim shares a “theory-informed approach to transforming our educational practice,” as there has been “little opportunity to consider and explore new learning paradigms” (p. 2). She is mindful of how our world has changed and expresses concern that education is behind the power curve. She speaks out, as educators are “missing opportunities to introduce better, different or more advanced ways of learning” (p. 2) rapidly enough in response to the latest paradigm shifts we are experiencing in daily, personal life, due to the communicative and analytical power of digital technology in all of its forms. As mentioned above, Harasim and other researchers have initiated “theory-based or research-based guidelines to assist educators to develop more effective pedagogies for online learning environments” (pp. 2–3).

Reading Chapter 2 provides a clear and concise historical overview of four paradigmatic shifts in human development impacting communication and education: speech, writing, printing, and the Internet. We come to understand more fully how the existence of online and digital social networks and web 2.0 tools reinforces the need to acknowledge the shift to a Knowledge Age, as our economic world values the knowledge we locate, create, exchange, and sell. As technology determinists have commented in the past, there is no turning

back or away from the power of the tools that guide us to locate, create, and exchange knowledge and facilitate this action as a collaborative process. Not only do we need to recognize the shift in what individuals need to do with digital technology, as educators we have to develop newer strategies and visions for what happens in classrooms and less formal learning opportunities. Harasim provides evidence that how we teach and how we evaluate the effectiveness of our pedagogy and instructional activities also requires change. In subsequent chapters, she describes examples of how fellow researchers have documented pedagogic decisions and the use of resources and technology, all taken in order to create online collaborative learning environments responsive to students’ needs.

Chapters 3, 4, and 5 give us a historical and cited description of three learning theories that dominate 20th century educational practices: behaviorist (Chapter 3); cognitivist (Chapter 4); and constructivist (Chapter 5). Behaviorist learning theory focuses on what is observable to determine how to teach and how to measure what is taught. Harasim explains how the focus on (1) instructional design (precision, prediction, and replication), (2) Bloom’s Taxonomy of Learning (complexity of the cognitive and affective domains), and (3) the role of computer assisted instruction, intelligent tutoring systems and digital learning objects reflects the need to know how to teach and measure what has been taught. Cognitivist learning theory seeks to know how the mind makes sense of stimuli as we learn new things. Contributions of Gagné, schema pedagogies, and intelligent tutoring and authoring systems contribute to the reader’s understanding of the recent paradigm shifts in education. Constructivist learning theory seeks to understand how knowledge is transferred from instructor to student. Contributions of Piaget, Vygotsky, Bruner, Jonassen, and Gardner on the complexity of cognitive development extend the readers’ recognition of the need to transform how we structure learning opportunities. Chapters 4 and 5 provide a coherent overview

of key theorists and researchers, along with cited explanations of their contributions to cognitivist and constructivist instructional practices. Since we have entered the 21st century, whose innovations offer us a different approach to communicate and to learn new ideas, Harasim posits that a new learning theory is needed to guide our work as educators and educational researchers.

Chapter 6 explains this new learning theory: online collaborative learning theory (OCL). Due to the increasing value society ascribes to knowledge and the process in making or synthesizing new knowledge, Harasim notes how online technologies transform and enrich conventional classroom experiences, enabling a diverse, global knowledge community to leverage individuals' intellectual capacities through collaboration. She cites Means, Toyama, Murphy, Bakia, and Jones's (2010) final report based on a meta-analysis of comparative studies of face-to-face and online courses, the growth of online education across almost all disciplines, and Lohr's (2009) assessment that online learning's individualized and engaging activities within a community extend traditional classrooms, as evidence for a theory, framework, and method to implement and scientifically document these evolving approaches to teaching.

Harasim (2002) proposes, in the OCL Theory of Discourse, that there are three intellectual phases within online collaborative communities as new knowledge is synthesized: (1) idea generating; (2) idea organization; and (3) intellectual convergence. As online tools are selected and the online environment is created, the shared online space is filled (by students and facilitators) with data for transcription and analysis to determine the degree to which the members of an online community of learners have engaged in these three intellectual phases. The attributes of these online learning spaces—at several levels—deserve documentation and analysis, if we are concerned with capturing the benefits, barriers, and contextual factors supporting effective online learning.

Online instructors and researchers can benefit from guidance and exemplars in setting up and maintaining these online collaborative learning communities. Chapters 7, 8, and 9 provide readers with such examples. Chapter 7 focuses on online collaborative pedagogies in practice through descriptions of (1) the traits of online case studies, (2) a nonformal global professional development program, (3) student-led online seminars, and (4) the design and implementation of online games and immersive learning environments. Chapter 8 shares details of eight cases of institutional innovation to provide online and blended learning experiences in a range of settings. The details of these cases focus on the organization and supportive infrastructure selected to meet the requirements of these diverse learning communities, the impact of one institution (the Open University in the United Kingdom or the University of Phoenix), and others having a regional or global reach (State University of New York's Learning Network, eArmyU, and an agency of the United Nations).

Chapter 9 focuses on the cultivation of an online community of practice and traits of successful communities of practice. Discussion of the development of a community to serve as editors of Wikipedia and the evolving interactions of members of the Global Educators Network guides us to Harasim's presentation of an analytical framework to monitor the community's benefit, interactions, knowledge growth, and need or direction for redesign. Through an analysis of transcribed online conversations and contextual indicators, Harasim posits we can identify the presence of social discourse, intellectual discourse, and moderating discourse. These social and intellectual indicators offer evidence of the benefit of online collaborative learning communities, using qualitative and quantitative analyses of suggested data sets. Harasim provides examples of the rich data to be collected, and how we are to analyze these data. Offering us links to segments of the databases of a specific project or community (as shared in Chapters 7, 8, and 9) could help readers gain a fuller sense of what is

to collected for analysis and how it can be structured so analyses yield sought-after findings. Harasim shares powerful quotes from members of these exemplar online learning communities, providing specific text to represent these different forms of discourse and intellectual phases so new knowledge is synthesized through online collaborative interactions over time.

Chapter 10 begins with an overview of the historical paradigm shift leading us to the 21st century's high valuation of knowledge and the creation of new knowledge. Harasim suggests four actions for members of the educational technology research community: (1) support increasing use of online communities of practice; (2) change how we conceptualize the design of instructional resources and activities; (3) promote analytical and visualization tools; and (4) increase the magnitude and access to computing power and storage of data for analyses. Through online communities of practice, professional development can advance and expand recognition of different types of discourse and intellectual activity as evidence of new knowledge construction. With increasing collections of instructional resources, often as open source, clarification of their use and access is needed.

Learning Theory and Online Technologies provides a readable, thorough, and thoughtful trajectory of how learning has changed over time. It proposes a grounded theoretical framework for four audiences. If faculty members and researchers need a book to help students understand the shifting paradigm and an overview of new research directions, Harasim's

book could be considered, in light of these trends within the educational technology research community. Educators can understand and shift the paradigm of learning or schooling in response to societal changes and economic needs. Teacher educators can guide practitioners through this paradigmatic shift and grasp of discourse and intellectual phases serving as the crux of new knowledge creation. Educational researchers can document, monitor, and analyze these paradigmatic changes and suggest revisions and enhancements to refine theory and pedagogic practices. Online course designers and facilitators can use this knowledge to inform their work and interaction with students.

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