

## Book Review

Hiltz, S.R. & Goldman, R. (2005). *Learning Together Online: Research on Asynchronous Learning Networks*. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN: 0-8058-5255-7

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### *Abstract*

*The book Learning Together Online: Research on Asynchronous Learning Networks (2005) is a comprehensive review of the current state of research on online learning. Co-editors Starr Roxanne Hiltz and Ricki Goldman bring together leading researchers in the world of virtual education to collaboratively author chapters. In the first section, theoretical foundations and research methods are delineated. The second section synthesizes current theory and research, proposing fruitful directions for further examination. Chapters focus on learning effectiveness online, virtual students, faculty roles, collaborative learning, varied media for online instruction, and fostering learning communities. Learning Together Online aspires to nothing less than transformative power for members of the higher education community. Readers are warned that reluctant faculty more than students or administrators are resisting movement toward increased uses of online collaborative platforms and tools for learning. Hiltz and Goldman point to the feature of asynchronicity itself as that which sets asynchronous learning networks apart from alternative learning environments, on or off-line. Questions for reflection and discussion complete each chapter to leverage continued dialogue beyond the text. Scholars, graduate students and online practitioners will find the research survey informative, the questions for further research compelling, and road forward succinctly paved by this work.*

Academic research on online learning has rapidly expanded over the last five years. Finally, following two decades of explosive growth in educational opportunities offered over the Internet, the quantity and quality of related research and theory is growing. Rapid growth requires the academic community to take stock of research goals that have been achieved and to orient future research efforts toward the most promising avenues for the next decade. *Learning Together Online : Research on Asynchronous Learning Networks* (Hiltz & Goldman, 2005) is an edited book with contributions from experts in the field of asynchronous learning networks (ALNs) on the current state of the research on online learning. The editors tell us this book aspires to nothing less than transformative power for members of the higher education community. Readers are warned that reluctant faculty more than students or administrators are resisting movement toward increased uses of online collaborative platforms and tools for learning. Each chapter synthesizes current theory and research and proposes fruitful directions for further examination. Overall, this compilation leverages the scholarly conversation on each of these important topics a layer deeper than most.

Starr Roxanne Hiltz spearheaded this collaborative effort. She is recognized in the field for her pioneering work with Murray Turoff, *The Network Nation: Human Communication via Computer* (1993) and *Learning Networks: A Field Guide to Teaching and Learning Online*. (Harasim *et al.*, 1996). Her co-editor is theorist Ricki Goldman, best known for her book, *Points of Viewing Children's Thinking: A Digital Ethnographer's Journey* (1998) and companion website, <http://www.pointsofviewing.com>. Collaborators on chapters of the book include known leaders in the field of computer-mediated communication: Maryann Alavi, Linda Harasim, Peter Shea, Karen Swan, Ben Arbaugh, and Raquel Benbunan-Fich, among others. The authors draw only on scientific reviewed publications and conference proceedings to gather the empirical studies that support current understanding of online learning and suggest avenues of further research. Questions for reflection and discussion complete each chapter to leverage continued dialogue beyond the text.

*Learning Together Online* establishes the theoretical foundations and research methods in which the online learning literature is rooted. The editors trace the origins of the ALN idea to a Sloan grantee meeting that took place in 1994 and ground their focus with the official definition of ALN (<http://www.aln.org>):

ALNs are people networks for anytime and anywhere learning. ALN combines self-study with substantial, rapid asynchronous interactivity with others. In ALN learners use computer and communications technologies to work with remote learning resources, including coaches and other learners, but without the requirement to be online at the same time. The most common ALN communication tool is the World Wide Web. (p. 5)

Hiltz and Goldman point to the feature of asynchronicity itself as that which sets ALNs apart from alternative learning environments, on or off-line, noting “asynchronicity, which may at first seem to be a disadvantage, is the single most important factor in creating a collaborative teaching and learning environment” (p.6). Freed from real time constraints, learners have time to think more carefully about and to edit their contributions to discussion. They can enter into dialogue when their ideas are fresh. Such asynchronous discourse is centrally situated in high quality online learning.

An Online Interaction Learning Model, based on an input-process-output model, defines the theoretical framework for understanding essential components of asynchronous, online pedagogy. “Inputs” are the group and its setting. Intervening variables are the learning processes of interaction, collaboration, and media sufficiency. Finally, the “outputs” include faculty and student satisfaction, student learning, as well as considerations of cost-effectiveness and access. This new framework builds on Harasim’s earlier conceptual framework (Harasim, 2002) for deconstructing learning events in order to reveal patterns in online, threaded discourse. Her framework distinguishes idea generating, idea linking and convergence events in dialogue. The new online interaction learning model informs other topics examined in the book.

A key contribution of this research synthesis is “the final answer” on whether ALN courses are as effective as “in-seat” courses. In summarizing the research the authors, Fjermestad, Hiltz and Zhang, find that ALN courses are overwhelmingly as effective, if not more effective for learning objective course material, than “in seat” courses at the university level. Measures of amount of interaction and student satisfaction were mixed, highlighting the need for further improvement in approaches to online

course delivery. Thus, the goal of these authors is to drive both the research community and the higher education community beyond initial boundary disputes toward exploring the more fascinating worlds within virtual learning environments. A useful appendix compiles 30 studies that compare the processes and outcomes of traditional face-to-face courses with courses using ALN to dispel entrenched doubt among academics.

Another important theme the book explores is how researchers can more productively move our collective understanding of online learning forward. The authors propose both qualitative and quantitative methods that “help determine which characteristics best predict ALN effectiveness” (p. 91). Most notably, future researchers are challenged to increase the generalizability of their work by moving beyond single-class study designs to incorporate multiple courses, multiple disciplines, and/or multi-institution samples.

The authors also offer a compelling alternative to the quantitative vs. qualitative research dilemma within online learning, called *quisitive* research (Goldman-Segall, 1998), which is a mixture of both qualitative and quantitative methodology. When approaching online discourse, quantifying participation (i.e., counting threads, individual postings or phrases within postings) uncovers some communication patterns while examining learner discourse for meaning and intention (such as knowledge-building or social presence) reveals others. Other terms used to describe a blended approach to research, namely “quasi-statistics” (Becker, 1970), “complementary methods” (Green & Harker, 1988) and “mixed methods” (Johnson & Onwuegbuzie, 2004) have been suggested elsewhere. The mixed approach entails a blending of qualitative and quantitative methods in order to enhance triangulation and thus strengthen findings. According to Goldman et. al., *quisitive* research “combines the quality of inquisitiveness and inquiry and the notion of the quantitative numerical quiz to understand the learning event” (p.111). Providing the blended approach with “a term of its own” rather than calling it “quasi” something else, “complementary” or “mixed” supports the approach with the recognition it deserves at a time when its value is increasingly gaining validation (Maxwell, 2005).

The authors also focus the reader’s lens on contextual factors that influence ALN. How do technological characteristics, institutional factors (technology and faculty support), course delivery considerations (software, network reliability), pedagogical and course content issues, instructional techniques, participant demographics and class size among other factors contribute to ALN effectiveness? Attention is also given to learners. What attracts students to online courses? What characteristics predict success? What can instructors do to improve success rates? Faculty roles and satisfaction, additional keys to success, are examined as well. Berliner’s (1988) insight is as salient today as it was nearly two decades ago, explaining prolonged resistance to shifting venues from the lecture hall to the computer monitor:

Many teachers experience face-to-face classes operate in a seamless fashion without cognitively negotiating every aspect of their classroom environment. Their expertise – usually gained through years of experience – permits them to function in an almost ‘a-rational’ manner. When these expert instructors consider ALN teaching, however, they revert to novice status in their relationship with technology. (pp.173-174)

The authors overlay Laing, Phillipson, and Lee's (1966) insight that faculty must accurately perceive how they are viewed by their students who are at a distance as an "enabling component for the ALN teaching environment."

The book raises important considerations as institutions of higher education scale up their online offerings. Current online higher education enrollments are approaching two million according to a recent survey of over 1,100 colleges and universities (Allen & Seaman, 2004). As institutions of higher education expand their online offerings faculty time requirements and online skill development issues must be addressed. The authors suggest that an essential area for further research is to examine characteristics of some faculty that contribute to their overall comfort using online communication tools – and to address whether or how these characteristics might be taught to others who have found the transition neither natural nor compelling. Most crucially, it is important for future research to determine the relationship between online instructors and the subject matter taught. Otherwise, the likely economic temptation will be to have experts build online courses and less-qualified individuals teach.

The authors point to a challenging vulnerability that members of the higher education community may face as they weigh choices around movement to increased online learning options. The task of shifting courses or parts of courses online is too often assumed to be primarily a technology training issue. The skills needed are more pedagogical than technical. These authors show that research to date indicates student satisfaction and learning correlates with interpersonal and behavioral aspects of course experience (regular interaction, prompt feedback, high expectations), not skilled use of multimedia. The unique strength of the medium is in the asynchronous timing of text-based messaging. Learners and instructors can be more reflective, deepen dialogue and experience multiple perspectives in this medium. Facilitating that level of class work is brand new.

To address the pedagogical challenge, collaborative learning online is highlighted. Chapter authors Alavi and Dufner report that research findings on effective collaborative techniques are mixed. However, they point out that these findings may be attributable as much to poor practice as to lack of effectiveness of the collaborative techniques themselves. The facilitating of online dialogue for learning may at once be the most vital and the least understood aspect of online teaching and learning, both on the secondary level (Zucker & Kozma, 2003) and in higher education (Roberts, 2004). Alavi and Dufner highlight the nascent state of research and knowledge in this area and the need for greater attention in the near future.

Another consideration pertains to media mixes (i.e., video, audio, synchronous and asynchronous text) for learning online. The authors conclude that the use of appropriate media outweighs any perceived expectation for a particular medium in a given course. Other factors such as clarity, feedback, and interactive dialogue were more related to learner satisfaction. The development of virtual learning communities also enhances the interactive aspects of learning online.

The book cohesively knits together the current empirical research in the online education arena and suggests future research directions. Evidence from recent studies suggests the possibility that new learning opportunities, particularly in the area of virtual learning communities (Swan & Shea, 2005), are still to be discovered. Social learning theory (Dewey, 1916; Rogoff, 1994; Vygotsky, 1978), builds on the power of

collaborative experiences for learning. The affordances of an online community include a text-based record of collaborative discourse, threaded posts that indicate who is replying to whom, and transcripts of synchronous chats that can be included in an asynchronous, follow-up dialogue for continued exploration of ideas and insights. A few of the latest tools, social bookmarking, RSS feeds and the like are igniting the near-future potential for collective learning. In *Learning Together Online*, theorists Goldman and Hiltz describe multiple layering of understandings in future asynchronous, text-based class dialogue where we might find,

...a distributed platform of multilogging in which all participants, learners, teachers, even researchers, engage in layering their viewpoints (posting replies-to-replies) to negotiate meaning with each other to better comprehend the subject they are investigating and to create new knowledge in the process.” (p. 15).

Swan and Shea point back to Carol Twigg’s (2000) challenge to educators to leave behind the old “in-seat” limits to teaching and learning in order to develop new paradigms that can more readily realize the full potential for deepened learning online (p. 253). The book leaves readers intrigued by the question: what intellectual capacity within the human brain, or within our collective, distributed cognition, will be tapped as today’s young, digital natives grow up facile with so many new technological affordances for learning?

*Learning Together Online* deepens our understanding of this exciting new frontier. Scholars, graduate students and online practitioners will find the research survey informative, the questions for further research compelling, and the road forward succinctly paved by this work. It makes one wonder where asynchronicity, the “single most important factor” of this evolving, new medium for teaching and learning, will bring us, as educators, learners and as a global society. The answer to that puzzle remains hidden for now.

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