Thirty Years Later: Educational Applications
of Computer Conferencing

Linda is a luminary in the area of online education, and a pioneer of pedagogies and processes to research online learning. Since 1983, Linda has been a leading teacher, scholar and speaker on the theories and practices of online education, contributing knowledge, technologies, and practices to the field of technology-enabled learning through her research papers and books. Linda's bio (https://lindaharasim.com) lists a 30-year history of professional distinction and provides a chronology of her many contributions to knowledge creation in the field of online education. We were delighted when Dr. Linda Harasim accepted our offer to provide her perspective on the field.

We asked Linda to comment on three questions about online education by providing a reflective commentary on:
- What remains true?
- What has changed?
- What needs to be changed?

What follows are responses from Dr. Linda Harasim.

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Thirty years ago I wrote an article presenting and analyzing the first online credit course that used computer conferencing, an online technology unique in its ability to enable group communication and collaborative learning. The course was thus in many ways unprecedented, enabling participants to overcome obstacles of time and place to log on to a common space to discuss, learn together, and undertake group projects. This was not a course in which students interacted only with a software program but one in which students engaged in peer collaboration and knowledge building with one another and with the professor.

The first online credit course delivered entirely via the Internet using group communication was taught January-April, 1986 at the University of Toronto, through the Graduate School of Education (OISE) by Linda Harasim and Dorothy Smith (Harasim & Smith, 1986; 1994). In fall, 1986, Starr Roxanne Hiltz offered undergrad courses online at the New Jersey Institute of Technology. Learning networks began to link school classrooms locally and internationally around this time. These early online educational activities were all based on collaborative learning.

What remains true?

What remains true and important about online education, is the following:
1. The emphasis on pedagogical and technological **design** of the online environment to support learning has been proven essential. Active, collaborative learning processes

enabled progressive discussion and group work, key components of effective learning. This was a significant advance over traditional passive learning based on CONTENT+QUIZ (i.e., didactic lecture pedagogy, and software approach taken by CAI, CBT, and, most recently, MOOCs).

    a. **Learning design** (LD) has been viewed as pedagogically different from instructional design (ID). There was a need to refocus from ID to LD.

    b. Successful **learning design** benefitted from technological learning environments expressly structured to support collaboration and knowledge building.

2. Online collaborative learning designs contributed to very positive learning outcomes, as good as or better than f2f courses. Our goal was to be *better than* traditional didactic learning outcomes, in terms of completion rates, teacher and learner reports of learning satisfaction, equitable distribution of participation, active and deep learning and understanding. Research demonstrates we met those goals.

3. Online collaborative learning typically integrated research and assessment, yielding a large knowledge base with valuable lessons for today's teachers and learners.

4. A theory provides an explanation and guide for how people learn, in this case, online together (either asynchronously or synchronously).
Online collaborative learning theory (aka Collaborativism) is essential in designing a pedagogy to support *effective* learning, i.e., with high completion rates, reports of user satisfaction, and evidence of active learning by all participants.

What has changed?

1. The subsequent rate of adoption of online education has been remarkable. In the 1980s, only a small handful of professors were teaching online. By 2016, six million students in the USA alone are taking at least one online course.

2. Online education is no longer a peripheral experiment; online education is today mainstream and essential.

3. There is increasing attention to learning theory and online education. My most recent publications are: *Learning Theory and Online Technology* (Routledge 2012; 2017). I am also completing a book on *The Theory and Practice of Collaborativism*, which analyzes the results of online learning activities over the past decade.

4. We are learning about learning, through online education. For the past several years, I've been studying online seminars and have developed a methodology to visualize learning processes and progress. Online peer discussion makes learning visible, whereby it can be more effectively studied, understood, implemented and improved (Harasim 2017).

What needs to be changed?

1. While the rate of adoption of online education has skyrocketed and expanded globally, sadly:

    a. The pedagogy of online education has received very little attention. Instructors replicate didactic methods from 20th century lecture halls, correspondence education or courseware: CONTENT+QUIZ. Such designs neither reap the potential of online environments nor do they encourage active thinking by students. MOOCs like other courseware are based on CONTENT+QUIZ,— clicking, not thinking. Moreover, teachers have put themselves at risk of being replaced by artificial intelligence driven MOOCs and endangering their students to a dumbed-down learning future.

    b. Today's "Learning Management Systems" (LMS) manage but do NOT facilitate learning. Today's LMS reflects yesterday's lecture hall.

    c. Online educators require support, training, and commitment to understanding the THEORY, DESIGN, and PEDAGOGY in order to achieve effective online education.
    d. Online educators should build on research and lessons learned to reinvent education before it becomes automated.
    e. Finally, Educators—Do What AI Cannot DO: help students learn to THINK.

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