

ONLINE TEACHING: RESCUING PIONEERS LEGACY

Goiânia (GO), May 2012

Alzino Furtado de Mendonça – Instituto Federal de Educação, Ciência e Tecnologia de Goiás (IFG) – afm@ifg.edu.br

Gilda Aquino de Araújo Mendonça – Instituto Federal de Educação, Ciência e Tecnologia de Goiás (IFG) – gaam@ifg.edu.br

Categoria: B

Setor Educacional: 3

Classificação das Áreas de Pesquisa em EaD:

Macro: C / Meso: J / Micro: N

Natureza: A

Classe: 1

ABSTRACT

Online teaching study involves understanding the teaching process in its complexity and in particular the teacher as someone who teaches besides classrooms context like in circumstances strongly characterized by virtuality. In a broader sense, teaching can refer to the teacher as a professional who learns the teaching-learning process as a whole and effectively operates in it, performing the necessary mediation so the learning happens. Three decades of online education history, this article aims to rescue of theoretical and practical contributions from researchers and educators, who in early decades from the rising of communication mediated through the computer network, performed the first educational applications in this new social technological educational way.

Keywords: online education, online teaching; pioneers of education.

1 Introduction

In the first decades of Computer Mediated Communication (CMC) use, many

researchers and educators saw its potential in the educational field and they succeeded because of their involvement in first educational experiences using this new technology and the theoretical work about the implications of this new teaching-learning process. The legacy of these pioneers nowadays is a source of inspiration for education and for the teachers' practice who work in courses based on the use of digital technologies. In this sense, this article aims to take a look at the period from 1970 to 2000, to regain some experience from a short history of CMC use, highlighting some authors whose academic productions have become a mark in the use of digital technologies in educational processes.

1 First Learning Networks

The adoption of educational computer network began in the mid-1970s, right after the invention of changing networks by packages, e-mail and computer conferencing. In the early years, university researchers and educators had limited access to computer networks. Nevertheless, some of the involved researchers in the first experiments as Arpanet were also academics. Starting by connecting students with a broader knowledge community, they introduced in their courses electronic mail (e-mail) and computer conferencing. This way, opportunities expanded for communication, interaction and collaboration among students.

Murray Turoff has developed a computer conferencing to be a "collective intelligence" system that could form a communication group to exchange information and problem solving [1]. At that time, computer conferencing text-based was the heart of network communication, while a collaborative environment, firstly used to exchange academic information and then to complete college courses.

The first courses fully taught in network began in 1981, with mini-courses and with worthless credits and executive training programs. The executive education program was one of the first to be launched in 1982 by the Western Behavioral Sciences Institute (WBSI) and coordinated by Andrew Feenberg.

As access to computers networks continued to grow, educators recognized that CMC could be used to perform a wide range for research and teaching. They also noticed that networked computers use was a new field so; they began exploring how they could make the students able to socialize in this new space. Their efforts opened a way for new approaches to collaborative work group, breaking the tradition of emphatic individual learning by distance learning.

Many experimental applications using these available resources to computer-mediated communication were made in American, British and Canadians universities: professional education , educative national and research network programs connecting classrooms students from different countries. Harasim [2] and the first ones to use the CMC formative processes named these educational activities supported by the use of computer-mediated communication in network as online education

2 The online education as a new field of research and action

Linda Harasim published in 1989 an article which argues that online education should not only be seen as a new way to delivery information and cannot be analyzed with the same parameters of classroom education or distance learning technologies before CMC. Otherwise, it is vital that planners, managers, researchers and students recognize the distinct nature of online education if they want to realize the potential of this new domain to increase options and educational opportunities. Therefore for this author, online education represents a new area of interest and expertise, a new area of learning, different from classroom education and also distinct from the field of distance education technologies before CMC, allowing teachers and students not only to participate in an easier way, more often and perhaps more effective of interactive learning processes, but also qualitatively develop new different forms of educational interactions.

The key attributes of this new unique tool are the asynchronicity like time

independency; non-presentiality which is independent on the place, interactive communication of all-to-all network through CMC way, and enriched text mode by other means. This attributes combination characterizes online education, but it is CMC that best distinguishes and specifies it.

Online education gradually started to be used in educational process in different ways, distinguishing the auxiliary mode (use the network to enhance classroom education), mixed mode (using network as a significant part of traditional classroom), and fully online mode (using network as the primary means of communication and learning).

However, the first experiments using the growing technology network showed a lack of necessary elements for its implementation in educational field. Whereas, for example, the nature of asynchronous communication, the teachers had to reshape their activities and change the way content is displayed in virtual environments. This process involved teachers investigation and creativity, administrative challenges, organizational, and educational costs. Many experiments failed, but they were examples that would serve as reference for future technology implementation and pedagogical developments

3 Computer systems for group communication.

The first computerized system for collective interaction online was developed at the New Jersey Institute of Technology (NJIT) in mid-1970 by Murray Turoff, a designer of computer-based applications, with a strong emphasis on group communication systems. Electronic Information Exchange Systems (EIES) was a conferencing system mediated by computer, which means an interfaces system specially designed to online learning. Turoff [3] designs an interfaces system for collective asynchronous interaction, which led to first online practice community, which participants were interconnected through EIES. In the early '80s, other experiences in online education began, being Western Behavioral Sciences Institute (WBSI) the first executive training program which combined classroom seminars and computer-mediated communication through the

EIES system. Describing this pioneering experience, Feenberg [5] reveals that until then no one had ever tried to teach a fully online course neither had ever studied in an online course. Everybody worked with no references, knowledge and precedents. The teaching process was largely based on trial and error.

4 Environments for online education

Philosophy of Technology professor at San Diego State University, Andrew Feenberg coordinated the first online course for senior executives. His experiences as a pioneer in online education started back to the early '80s, when he helped to inaugurate the first online education program at Western Behavioral Sciences Institute (WBSI) in La Jolla, California. Feenberg aimed to analyze the nature and potential of online education and developed software for online discussions, which features were designed to facilitate teacher work in order to facilitate collective interaction through text mode, some virtual techniques and active student participation.

5 Online courses models

For a long time Robin Mason directed the Center for Educational Technology at the Open University British. This university was one of the first to work, in the 80s, with CMC resources in distance learning courses and closely followed the developments in the history of online education. In 1998 Mason mapped an article from his experience at this university and observation of other important online education centers, with three online courses models, the evolution result of this new learning environment: Mason [5] grouped the online courses into three kinds: supported content model (content + support) which courses have self instructional materials; half-and-half model (wrap-around or 50/50) which courses involve half self instructional activities and half collaborative learning, and integrated model: which courses involve some activities like discussion and collaboration among students and teachers. In this model most of the activities involve online collective interaction, with few self instructional activities.

Students are encouraged to collaborate with the group, exchanging ideas, sharing opinions and looking for solutions to problems, doubts and questions. The teacher has to stimulate and coordinate the collective discussions, keeping the debate about the proposed themes.

6 The online teacher role

Zane L. Berge, assistant professor in the Department of Education of the University of Maryland, by doing the state of art about the teacher role in online environments in an article from 1995, identifies and describes some of them, grouping into four areas (teaching, social, managerial and technical) considered critical to the success of online learning, and recommending good performance in each of them.

The pedagogical function is about the tasks performance and obligations as a teacher trainer. The recommendations are: having clear objectives; keeping flexible; encouraging participation; maintaining a non-authoritarian style, being objective and developing a study guide, do not waiting too long, do not rely on offline materials; promoting contacts especially in public; finding common points; using simple tasks; making the material relevant; asking for contributions; presenting conflicting opinions; inviting experts, not lecturing; asking for responses.

The social function is related to promote social group cohesion and other ways to help participants to work together for a common goal. It is recommended: welcome those who not participate in public; prevent him-her self from fear, be careful about using humor or sarcasm; encourage participants to introduce themselves; facilitate interaction; highlight positive attitudes, do not ignore inappropriate behavior, exercise the moderator role when participants violate the netiquette rules or inappropriate language use.

The managerial function is to establish and keep the control of the activities schedule, the objectives of the discussion, the rules of procedure and decision making.

In this function to keep informality; distribute a list of participants, be willing to answer; perform the administrative responsibilities, be patient; ask for comments about metacommunication; synchronize and resynchronize; be aware of the proportion of teacher contributions; leading, send in private messages, be clear; avoid overload; control parallel subjects; vary the amount of participants' contributions; share tasks; preparation time; finalize sessions; rely on experienced teachers are recommended

The technical function is to make participants comfortable with the technological system that is being used, so they can concentrate on academic activities. In this area to use technical support, offer help for technical problems, allow time for students to learn so they feel comfortable with the technology that is being used are recommended. The teacher roles, categorized by the author as pedagogical, social, managerial and technical involve practicing the online teaching, but also requires an institutional action and multidisciplinary teams with planning professionals and educational activities implementation that have support from digital technology. Promoting online learning requires a growing complex domain not only the latest technology innovations and each of its features, but also new perspectives raised by advances in cognitive science and its implications for teaching-learning process.

7 Guiding principles for planning online courses

In an article from 1994, Collins and Berge [6] dedicated to explore the technological possibilities that arose in the last two decades and favored the teaching model adoption in small groups opposed to individual teaching models and learning through mass communication

Two dimensional characteristics highlighted the new way of communication: synchronous or asynchronous form and its potential to facilitate such social interaction as interaction itself with the course content.

Collins and Berge reiterate that in educational context, interaction is practically a

mark, a defining characteristic of general education and of vital importance for distance online education.

With no interaction, teaching becomes simply to transfer the content as a dogmatic truth and knowledge acquisition cycle, critical evaluation, validation do not take place.

In this sense, the authors present the following guiding principles for planning and development courses with digital communication technologies use: to use only the necessary technology (technological minimalism); content inversely proportional to communication, social interaction opposed to simple presentation of the content; adequate technical support and familiarization with environment, creation of collaboration environment and confidence.

8 The collaborative learning network model

Linda Harasim is a pioneer online education professor at the School of Communication at Simon Fraser University, in Canada, working since the 80's with projects of computer-mediated distance education who became a historian of the area.

In an article published in 2000, Harasim [7] states that we are experiencing a "paradigmatic change in education" as well as the socioeconomic aspect, and that online education represents a new area of education, which does not reduce the distance nor the computer-based training: this is a phenomenon of education that has been taking place in a new learning environment. "The challenge is to understand the key attributes that characterize this new environment and mold them into a new and powerful environment to support the new paradigm that can develop the job with knowledge and collaborative learning" (p. 52). Asynchrony, written language and computer mediation in online communication, however, become human interaction different from traditional communication situations, either by its emphasis on the presence of technological mediation, either by new space-time dimension that is experienced. We are even - believe her - heading towards to the end of unique school,

absolute that totally prevailed in previous education model. For this author, the most important thing in education is learning: how people learn and how we can support them, either online or in person.

9 Conclusion

The first online history education decades witnessed educators who, while exploring CMC possibilities in educational settings have opened new ways for education with digital technologies network, created other didactic-pedagogic procedures and contributed to understand skills, competencies and knowledge required for teachers in online teaching profession.

The online teaching pioneers experienced difficulties at those times that are still being faced by those who are beginning or work in this field and created - within the limits of available digital technologies development - solutions and strategies to overcome challenges and dilemmas as presenting themselves.

Solutions and strategies that now - after a long time of pedagogical maturity and technological innovation - can be revisited, reassessed or updated by teachers in online teaching profession.

Referências

[¹] Harasim, Linda. *Shift Happens: online education as a new paradigm in Learning. The Internet and Higher Education*. v. 3, n^o 1-2, 2000, p. 41-61. Disponível em: <<http://www.sciencedirect.com>>. Acesso em 23.01.2009.

[²] _____. *On-line Education: a New Domain*. In: MASON, R. & KAYE, A. (Eds.). ***Mindweave: Communication, Computers, and Distance Education***. Toronto: Pergamon Press, 1989. p. 50-62. Disponível em: <<http://www.bdp.it/rete/im/harasim1.htm>>. Acesso em: 30.01.2009.

[³] Turoff, Murray. Ambientes para educação online. In: *Pioneiros da educação online: e-book do Curso Pioneiros da educação online*. Rio de Janeiro: Aquifolium Educacional, 2003. p. 71-118.

- [4] Feenberg, Andrew. Dinamizando a aprendizagem colaborativa em educação online. In: *Pioneiros da educação online: e-book do Curso Pioneiros da educação online*. Rio de Janeiro: Aquifolium Educacional, 2003. p. 119-175.
- [5] Mason, Robin. Modelos de cursos *online*. In: *Pioneiros da educação online: e-book do Curso Pioneiros da educação online*. Rio de Janeiro: Aquifolium Educacional, 2003. p. 14-70.
- [6] Collins, Mauri P.; Berge, Zane L. Guiding design principles for interactive teleconferencing. 1994. Disponível em: <http://www.emoderators.com/papers/augusta.html>>. Acesso em: 22.01.2009.
- [7] Harasim, Linda. O Estado da arte em educação *online*. In: *Pioneiros da educação online: e-book do Curso Pioneiros da educação online*. Rio de Janeiro: Aquifolium Educacional, 2003. p. 176-225
- [8] Harasim, Linda et al. *Redes de aprendizagem: um guia para ensino e aprendizagem on-line*. São Paulo: Editora Senac São Paulo, 2005.
- [9] TELES, Lúcio. A aprendizagem por *e-learning*. In: LITTO, Fredric M; FORMIGA, Marcos (Orgs.). *Educação a distância: o estado da arte*. São Paulo: Pearson Education do Brasil, 2009. p. 72-80.