Chapter 81
Remote Teaching and Learning:
Design Models and Organizational Solutions

Giovanni Ganino
University of Ferrara, Italy

Laura S. Agrati
Pegaso University, Italy

ABSTRACT

Distance learning in the knowledge society, characterized by the massive use of information and communication technologies, is increasingly used and leads to teaching and learning methods that are different from conventional ones: use of networking, high degree of independence of the teaching path from spatial and temporal constraints, continuous monitoring of the learning level both through tracking and through frequent assessment and self-assessment, enhancement of multimedia and digital cognitive artifacts, enhancement of the interactive potential offered by computer-mediated communication and use of learning environments (SML) with socio-constructivist characteristics. This methodology includes teaching methods and strategies aimed at creating a new learning environment. The network becomes a school, a university, a place of formal and non-formal training, and is therefore an important area for experimentation and pedagogical research.

1. INTRODUCTION

Distance learning in the knowledge society, characterized by the massive use of Information and communication technologies (ICT), is increasingly used and leads to teaching and learning methods that are different from conventional ones: use of networking, high degree of independence of the teaching path from spatial and temporal constraints, continuous monitoring of the learning level both through tracking and through frequent assessment and self-assessment, enhancement of multimedia and digital cognitive artifacts, enhancement of the interactive potential offered by computer-mediated communication and use of learning environments (Learning management system) with socio-constructivist characteristics. This methodology includes teaching methods and strategies aimed at creating a new learning environment, the network becomes a school, a university, a place of formal and non-formal training, and is therefore an important area for experimentation and pedagogical research.

DOI: 10.4018/978-1-6684-7366-5.ch081

In its latest evolution, distance education is directly linked to the concept of computer-mediated communication (CMC), i.e., to the communication process that has taken place since the 1980s, thanks to the connection of computers to the electronic network, in the absence of spatial and temporal constraints (only spatial in case of synchronous communication). Theoretically, computer mediation in the communication process leads to major transformations (Mantovani, 1995): the shift from the Shannon and Weaver transmission paradigm, known as the parcel-post model, based on the linear transmission of a message from the broadcaster to the receiver, to the paradigm of two-way network communication based on the co-construction of messages, and on the sharing of speakers of a common ground of languages, beliefs and expectations (communication as social construction of meanings) (Rivoltella, 1998). It should also be noted that computer-mediated communication can lead to some critical issues such as an increase in message ambiguity and the possibility of misunderstandings due to the absence of the communication codes used in physical situations in person. These risks, known as aberrant decoding, communication difficulties and sociality factors, can have an important negative impact on distance education: aberrant decoding refers to misunderstandings of communicative meanings (caused by the decontextualization of CMC, contraction of usable non-verbal codes, lack of feedback in asynchronous communication); for communication difficulties reference is made to the possibility of polarization of CMC which may result in aggression and offensive messages (flaming) or flame war; main critical sociality factors include lurking, that is, the behavior of those who connect to online environments without taking part in them, but only reading the content contributed by others, lower attention levels caused by lack of context (especially if the webcam is turned off), increased cognitive burden, the perception of loneliness especially in the cases of asynchronous communication and self-learning courses (Ferrari, 2006; Rivoltella, 2021a). This premise places our definition of remote learning within a problematic framework, far from technocentric determinism, and close to theories that consider technologies, used in a skillful way from a pedagogical point of view, useful for teaching.

2. BACKGROUND

We now talk about distance learning or remote learning to indicate learning processes that take place remotely (anywhere, anytime) and focusing on the learning process as a change in human disposition or capacity that persists beyond a period of time and is not simply attributable to the growth process (Gagné, 1985). The same emphasis of the learning process is also found in didactic experiences in e-learning or blended-learning, which can take place either in conventional didactic situations, in person, in the same physical place (when using the classroom network), or remotely (online). The emphasis on the concept of networked learning (e) shows that the quality of educational actions depends on the conditions that it can provide for students, for those learning (Rivoltella, 2021b, p. 13). The educational actions must take place in learning environments within which the key educational and relational dynamics used in conventional teaching can be recreated. This is why an appropriate definition of virtual classroom seems to be as follows: “A communication space that allows students and teachers who do not share the same place to co-build knowledge through a system of relationships involving the definition and management of an emotional atmosphere” (Rivoltella, 2021c, p. 276).

The history of distance didactics, classified in, first, second and third generations, is marked by a path that links technological evolution, from the press to the Internet, passing through mass media (Garrison,