Chapter 7
The 'Technology' Pole

Jean-Claude Bertin
University of Le Havre, France

Patrick Gravé
University of Le Havre, France

INTRODUCTION

This chapter will try to answer the following questions:

*   What trends have influenced the relationships between technology and education?
*   Is 'technology' a unified concept?
*   How can technology improve language learning?
*   What functions can be attributed to technology?
*   How do language learners and teachers perceive technology?

Whether new or old, technologies are a recurring issue in the practice of university teachers and researchers. While they form an integral part of everyday life, they are considered as specific objects in the field of research and teaching. Although they are prized for their instrumental functions, their epistemic dimension remains largely ignored. Resorting to a technical device to optimize a research or a teaching activity or make it more comfortable seems operational; pondering over what this technical device modifies in the organization of the message and the tasks, as well as in the subject (teacher and learner)'s representations is often regarded a waste of time and efficiency. The energetic and material cost is then considered too high for the individual and the collectivity. Yet, if one easily disregards the changes brought about by the introduction of an artifact in educational interactions, the risk is high simply to reproduce the same thing indefinitely: a technically improved pedagogic model – sometimes at a high cost – but basically still the same[1]. (Albero, 2004, pp. 253-54)

Albero's reference to the academic context of universities, which can easily be enlarged to distance learning as a whole, is a clear reminder of the 'analyzer' function of technology and distance (chapter 2).

What this chapter will show, however, is the difficulty to provide an appropriate and comprehensive definition of the 'technology' pole of our model for a variety of reasons, both historical and pragmatic. To form a clear idea of our ergonomic model of distance language learning, we need to be able to recognize which, among the various forms and uses of technology, can actually be accepted as an added-value to the learning process. Another way of asking the question is: in what ways can computer technologies offer better answers to language learning than the previous ones?

Computer technology can be characterized by three main innovating features of interest for language learning:

- The **digital** nature of the data, which offers a technical solution to the ergonomic problems raised by the former technologies: portability, flexibility, absence of linearity in the access to information, all of these combining to provide a new environment for distance learning.
- The **interactive** nature of the computer, i.e. its capacity to 'respond' to its user's solicitations, to 'analyze' his reactions and 'suggest' possible solutions while at the time keeping track of the learner's progress. The anthropomorphic nature of these actions suggest the presence of 'virtual actors' in the new learning spaces (tutors, peers…).
- The **communicative** dimension stemming from the development of networks and more especially of the Internet, which abolishes, or at least partially hides, geographical distance (chapter 2).

For all their rich pedagogic potential, these technological innovations must be checked to avoid falling into the technocentric temptation. The most recent breakthroughs in no way invalidate S. Savignon's warning:

A teacher's dream: teachers dream of finding the ideal materials; materials that are at once very accurate and imaginative, that offer both sequence and flexibility and that provide variety yet respond to well-defined instructional goals. (…) The search for materials leads, ultimately, to the realization that there is no such thing as an ideal textbook. Materials are but a starting point. Teachers are the ones that make the materials work for their students and for themselves in the context in which they teach. (Savignon, 1983, pp. 137-8)

This vision is all the more transferable to our context as our initial distinction between learning environment and (virtual) learning space forms an integrative and comprehensive approach (Figure 20 in chapter 1) which takes into account the variety of learning materials and aids.

The issues affecting the technology pole, then, concern the ways to reconcile technical characteristics with didactic concepts: how to move from digital flexibility to individualization and distance learning? How to generate cognitive interaction through interactivity? How to engage the learners in authentic communication through networking?

In order to examine the various possible approaches to these questions, and before considering the problems involved in the definition of this pole, we will first analyze the type of relationships that language learning and technology have long entertained.

TECHNOLOGY AND EDUCATION: EVOLVING RELATIONSHIPS

The history of societies is marked by technological breakthroughs which characterize social institutions. Innovation indeed is the challenging

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