Chapter 5

The Complexity of Finding Information in Collaborative Information Systems: Cognitive Needs

Aida Varela
Universidade Federal da Bahia, Brazil

Marilene Lobo Abreu Barbosa
Universidade Federal da Bahia, Brazil

ABSTRACT

This chapter reflects objective and subjective principles to organize and disseminate information. It presents the human condition in the dynamic of searching and using information by making explicit the informational need of the user with learning theories, information organization, and user studies as subsidies. This is done in order to increase the development of cognitive trajectories to search, select, and use information, bearing in mind the permanent process of modifiability to face new environments. Finally, the text focuses on the social and economic development promoted by the science and technology advances, pointing out the social gap that has emerged from this reality.

INTRODUCTION

Libraries and files were the first systems of information organized by knowledgeable persons to allow information access. The contemporary information systems for scientific, technological, economic, cultural, et cetera, though they absorbed the finest information technology, have taken the role of globalizing the knowledge produced and accumulated by humanity transmitting it to other generations. Actually, what is evident is the constant demand for knowledge accessibil-
ity from the traditional libraries to the modern information systems.

The insertion of collaborative technologies in information systems since the creation of web 2.0 makes changes in the relations of production/creation, dissemination, and accessing to information; for example, the all-to-all communication process is based on the “from many to many” participatory philosophy, in which all sorts of communication are hybrids and dynamical to make records, while the documents become, many times, socially recognized collective products.

Although this rearrangement in the flow of information has become more effective, the communication process between the groups, with the intermediation of this technological display, can be done in real time and in a shared and interactive way. Increasingly, the autonomy of the user to seek information is the objective in the movement of globalization of knowledge, and it requires the application of more complex cognitive trajectories to make effective the search process and use of information. The answer given by TICs was to create friendly and interactive solutions, and by libraries, an action to enable the user with information literacy. It also implicates mediation and application of cognitive theories and establishes services oriented by the philosophy of the interactivity between the parties and the simultaneous collaboration that have been identified as Library 2.0.

The tendencies of the contemporary systems are to integrate collaborative technologies with free access, to increase the information access, seeking to obtain knowledge. It demands further studies on user cognitive maneuvers at the moment of capture, processing, and transcendence of information, and the impact of using of this new knowledge of society. Future studies should also be conducted on the role of mediator and the librarian in this context, as well as of sophisticated mechanisms and search tools for the multiple syntaxes.

Consistent with the nature of the presented phenomenon, this chapter reflects, based on a context of constant changes in virtual environments of organizing and propagating of information, about the principles to make the human condition objective and subjective in the dynamic of searching and use of information. It does so by making explicit the informational need of the user, having the reading as subsidy, the informational competencies and the mediation of the information professionals, creating and offering interactive services that answer the user’s questions, making effective the propagation, and improving signification and usability of the information.

Finally, the text presents considerations about economic development and social well-being promoted by the advancement of science and technology. It also considers the appropriation of the scientific knowledge for the privileged stratum of society, anywhere in the world, and the social gap that has emerged from this reality of high technology in the social classes in higher classes and social strata sidelined for several socioeconomic reasons.

COGNITION AS SUPPORT TO BUILD THE PROCESSES OF SEARCHING, RETRIEVING AND USING OF THE INFORMATION

The theoretical and experimental studies from the 1950’s aim to solve the issues of and information recording and retrieval, made clear by Saracevic:

“[…] the nature of information, the knowledge structure, and its records (including Bibliometrics), the use and the users, leading to studies of human behavior with information; the interaction man-computer, with emphasis on the human side of the equation; relevance, utility, obsolescence and other attributes of the information use along with methods and measures to assess the information retrieval systems; economy, impact and value of the information, among others” (Saracevic, 1996)