Chapter 2
Collaborative Environments Based on Digital Learning Ecosystem Approach to Reduce the Digital Divide

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ABSTRACT

The differences in term of access and ICT skills between different groups in society have created a problem of digital divide. To overcome this problem, models and strategies are required to achieve a greater impact on the population, and that population can develop skills that enhance inclusion in the society of knowledge. This chapter proposes the design of a collaborative environment based on digital literacy ecosystem approach that aims to set a new educational paradigm approach to encourage different learning communities to use new ICT that allow them to be more competitive in today’s world and thus improve the digital divide problem.

INTRODUCTION

We are facing a new emerging society based on the use of ICTs called the Knowledge Society, which according to Alzate (2000) under his influence modifies economic, cultural, political and social concepts. This condition has transformed information

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and knowledge into the main resources and products of any activity, and particularly ICTs into a factor of social transformation. Marcelo (2001) affirms that knowledge is one of the main values that citizens have in today’s society. The value of today’s societies is directly related to the level of education of their citizens and their capacity for innovation and entrepreneurship.

In the knowledge society, people’s ability to move in a world with a wealth of information and where life is organized around communication is fundamental. For this reason, digital skills are key to the inclusion of citizens in the digital age and knowledge society. In addition to this, the citizens must also understand the potential of ICTs as a tool to support creativity and innovation.

In this context, knowledge-based societies substantially change the behavior of citizens (Ayuste, Gros, & Valdivielso, 2012). Therefore, those societies that may enter the knowledge society, their citizens will be able to access other levels of prosperity and progress. However, in order to enter the knowledge society, the problem of the digital divide must first be resolved.

The digital divide was originally understood as the mere existence of a group excluded from the information society, due to the lack of access to technological resources. With the passage of time, the concept of the digital divide begins to acquire complexity. Recent research has identified multiple reasons why digital divide occurs. Wessles carried out several studies on the digital divide and observed a number of reasons for digital inequality: a) socio-cultural aspects such as ethnicity, age, academic level and economic status; b) differences between infrastructures in different parts of the world that allude to inequality caused by global economic differences, and; c) scarce cultural capital to use technological resources, or lack of global skills or knowledge.

Pliscoff, Ramírez, and Vásquez (2006) say that the digital divide refers to the existing differences in terms of access and management of ICT between different groups in society.

Bridging the digital divide should not only focus on providing equality or ease of access to the greatest number of people in a given region, but also on improving the quality of life of people, for example by improving education (San Juan-Rivera & Bielma-López, 2011).

In order to reduce the digital divide, several educational interventions have been carried out on “Digital Literacy”. Digital literacy is the basic ability to understand and express oneself through different languages and media. Furthermore, being digitally literate implies developing knowledge and skills in relation to information through ICTs, as well as developing values and attitudes of a social and political nature in relation to technologies (Pinto, 2008). These competencies and skills are what allow a citizen to obtain information and build useful knowledge. Under this situation,
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