Chapter 2
Shifting Perspectives
With Open Textbooks:
Adaptive Learning

ABSTRACT

Digital screens are everywhere. The world of textbooks becomes vibrant, challenging, interesting, and filled with various global opportunities and tremendous risks. Open textbooks are used for reading, digital literacy, visual literacy, and multimedia. They are incorporated into a variety of learning environments. It is a real need for new psychopedagogical models based on adaptive learning. But, what open textbooks are in need to be developed for success? This chapter explores the shifting perspectives of learning with open textbooks and concludes with the need for future research in adaptivity and interactivity. It analyzes the concepts of affordability, adaptivity, feasibility, open learning, open science, open culture, and open learning environment in order to outline the scientific framework of the metasystems learning design theory. The conclusion is provided at the end.

INTRODUCTION

Digital screens are everywhere: we wake up, living and go to bed with them. The world of textbooks become vibrant, interesting, challenging, and filled with various global opportunities and tremendous risks. In the face of endless information, videos and digital images demanding our attention, we are

trying to adapt our behavior and actions. Thus, digital screens are an ever-growing presence in our reality. "They" capture our attention when we trying to understand the environment, and in a specific manner help us make more informed decisions. We look at various screens, thinking that our cognitive activities will be more exciting, but, unfortunately, our experience to learn is less and less. Moreover, we're finding fewer and fewer textbooks that help us to learn. This style of life has a big cost. When reading on a digital screen or concomitantly at various screens we only scan the information without deep processual actions and, therefore, we learn less. However, we glimpse our digital screens without getting up.

It is widely accepted that open textbook is a valuable resource for reading. The common understanding of the open textbooks affordability is: *the open textbook helps us to gain unique experience with digital reading, digital literacy, visual literacy, and multimedia*. However, whilst the affordability of open textbooks is challenged as a result of various global and ecological issues, the instructional design principles are changing, too. It is expected that open textbooks will play an important role in metacognition and self-regulated learning. These models will require an adaptive strategy.

This chapter is the first attempt to explore the issues of adaptive learning in the context of increasing influence and impact of digital screens on learning and OER initiative. The chapter starts with some historical facts regarding adaptive learning, then investigate the question of adaptation, issue and contradictions in adaptive learning; the specific questions of how useful is to use and to develop open textbooks, then it is analyzed the role of open textbooks for reading and literacy; differences between adaptation and adaptive learning technology. Then, it is investigated "open science", "open culture", "adaptive curriculum" etc.; issues and solutions of adaptivity in open textbook use and development and the perspectives of metasystems learning design of adaptive learning environment.

SETTING THE STAGE

Some Historical Facts

Adapting learning is not a new concept for education. Historically, this concept refers to a teaching method that facilitates comprehension and active learning.

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