Chapter 8
Adaptive Online Learning Technology: Trends in Big Data Era

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ABSTRACT

The current trend of technology advancement with digital devices such as smartphones, tablets, and laptops has shifted the way of societal life including teaching and learning. This initiative might also contribute to the typical approach of information and communication technology (ICT) to increasingly enhance the achievement through utilizing it in the education setting in the higher education context. Adopting social media in network data massively within the big data trends, the extraction of the particular means in providing structured data from enterprise resources data and sources of unstructured data from audio and video can begin with providing the value from information space such as message, conversation, transaction, and other sources. This chapter attempts to explore the design of adaptive learning technology in big data approach. Attempts to achieve particular advantage of big data with analytic process could provide the innovative environment of adaptive online technology to enhance pedagogy and technology skill to support the initiative way of teaching and learning process in the higher education (HE) context.

INTRODUCTION

In the past few years, attempts to utilize the technology development such as smart phones, tablets as well as laptop have a wide chance in promoting an appropriate way to improve effectiveness and efficiency of practices on teaching and learning in higher education (HE) (Ahad, Anshari & Razzaq, 2017; Borés, Saurina & Torres, 2003). In this regard, the advancement of technology devices initiated to supply the human interaction basis should bring along with bridging the attempts to promote the practices with appropriate way. In terms of pointing out the worldwide to improve the quality of learning process through emerging the online learning with the approach in considering the way to facilitate multiple sources for the information, attempts to fulfil this inquiry should be acquainted the needs referring to their demand to be given into the learning and teaching material resources. With regard to the initiative in utilizing digital devices to be cooperated into the wide range of teaching and learning in HE context (Almunawar et al., 2017), this facilitation has to be involved into online learning basis referring to give insights with committing to assess online resources along with enhancing the learning design recommended to support the entire initiative in the attempts with a better service to transform the material sources to entirely engage in providing a wide range of task configured into an attempt with the necessary response in the management of educational process. Referring to the online-based learning and teaching with innovative strength and awareness of careful competencies transmitted into HE context as an attempt to enhance the commitment to fulfil the inquiry based on the learning process, it is necessary to
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