Chapter 25

Learner Management Systems and Environments, Implications for Pedagogy and Applications to Resource Poor Environments

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ABSTRACT

Knowledge management is essential for realizing that knowledge is power, and power is explored by the learner for meeting existing demands and challenges. Advances in technology, education and learning are therefore linked to using technology. Education is the pathway to productivity, thus the learner is the agent and technology the medium. Among others, e-Learning will play a dominant role in shaping learner management systems and associated learning environments. This chapter addresses the learner and learning management describing some of its implications for pedagogy. It then describes and proposes some implications of the application of these systems for development in resource poor environments.

It is divided into three main sections. The first section describes contemporary definitions of LMS and its concepts. It proposes a comprehensive definition of LMS and describes possible future directions of these definitions as a concept in change. The second section describes various tools and classifies them according to current applications in the industry. It describes in principle, the current cutting edge technologies that are being used in the area and how these were developed. It then proposes a Model Structure for Learner Management Systems. It describes and compares classical, e-based and blended learning pedagogy. A third section discusses some current concepts and methodologies in research, pedagogy and LMS, proposing some defining questions for the three areas as a group. The third section first defines and describes resource poor environments. It then highlights and discusses some need areas in resource poor settings. Further, it describes and discusses some of the implications of LMS technology and applications to resource poor settings, with a focus on its relevance and validity for specific resource poor environments. Following this discussion, the section describes some applications and limitations.

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INTRODUCTION

This chapter describes trends in learner management systems and learning environments, and their impact on student learning and preparation. Knowledge management is essential for imparting the power of knowledge, skills and competence. That power is explored and applied by the learner for meeting past, current and future challenges and demands. Advances in education and learning are linked to the use of technology. Since education is the pathway to productivity, the learner is the agent and technology the medium. Among others, e-Learning will play an increasingly dominant role in shaping learner management systems and associated environments for knowledge, skill and competency transfer and acquisition.

Educational institutions and corporate bodies are turning to e-Learning primarily because it has capabilities to effectively impact a larger community for the least amount of investment and expense. Secondarily, it is contributing to an increase in retention and recruitment. To fully apprehend the results of e-Learning, it is important to examine the systems of learning available, how to manage them, and how they can be integrated with other learning environments.

Available e-Learning systems and tools must be managed to address effective translation. For example during initial learning, the organization determines how to present new skills and concepts to the new learner. Management will monitor the process to assure that learning tools are providing the learner with a foundation of the knowledge delivered in a particular area of interest. The tools applied are also assessed for learner progress from entry-level competence required to the end of learning. Application of tools also requires managing the transfer of skills for learning the tools in a particular area from one person to another.

This chapter addresses the learner and learner management, and describes/discusses some of its implications for pedagogy (teaching approaches). It then describes and proposes some implications of applying these systems for development in resource poor environments.

LEARNING AND LEARNER MANAGEMENT SYSTEMS

Definitions of LMS

We begin by looking at various users and researchers, and their definitions of LMS. We identify formal and informal systems and elaborate in short on each. We then explore and review practical definition groups, and theory-driven definitions. Finally, we present a more encompassing definition that accommodates all the different classes, both practical and theoretical.

Formal and Informal Systems Definitions and Applications

Various definitions have been appended to learner management systems (LMS) and their corollaries, depending on who makes the definition and their environments. There are currently three main environments: formal and informal. The formal systems have two main sectors: corporate and academic. The informal system is much more ubiquitous and seems to contain more content, with no specific evaluation systems except to see changes in common usage as the system grows. This system is growing with few controls for proprietary content. The system also provides a major social learning medium today, especially for young people. It ranges from simple one-on-one interactions in synchronous space, to much more
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