

Chapter XXVII

Instructional Technology Plans for Higher Education

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ABSTRACT

Technology planning is an indispensable activity for all higher education institutions nowadays. The major purpose of the technology planning is to utilize technologies effectively and implement them for communicative, managerial and instructional purposes. This chapter offers a dynamic and adaptable framework for technology planning project in higher education institutions. Basically, the framework compares the mission and vision in terms of three dimensions; Peopleware, Hardware and Software. Peopleware focuses on all people within faculty organizations such as students, academicians and administrators and analyze their current situation in terms of four different interrelated points (technology knowledge, value, belief and attitude) to depict their levels (naïve, apprentice, professional and experienced). In the hardware analysis, the author analyzes personal computers, networking tools, other peripherals (printers, scanners, and etc...) and the building. For software analysis, starting with the operating system, entire software required for instructional and professional purposes are documented. In the last step, project team analyzes the data holistically and creates yearly developmental activities in terms of applicable recommendations.

INTRODUCTION

In parallel to innovations in the world, our societies are continuously developing and evolving.

As a result, both governmental and industrial organizations begin to work out the restructuring ways for increasing their effectiveness and productivity. For the adaptation of societies into

modern era and for their preparations for the innovations, “education” is the reality and the necessity for us. As the technology has emerged in the field of education and reflected its effects on educational systems (Westera, 2004), technologies are perceived as a panacea for all instructional problems. Moreover, as Whelan (2004) pointed “today’s teens view technology not only as a part of life, but as a way of life” (p. 48).

After a certain time, scientific research studies have shown that there is no significant difference between technologically furnished environments and their counter parts. For instance, well-known educational technologist; Clark (1983) frequently emphasizes that there is no evidence showing that utilization of any medium for delivering instruction yields better learning benefits. On the other hand, the same studies demonstrated that there are certain benefits in terms of instructional and managerial time efficiency, enrichment of instructional contexts in terms of materials, easy student record-keeping activities. Similarly, Clark argues that media utilization offers some opportunities for performance and time savings. In that sense, the scholars from different disciplines have started scrutinizing the underlying reasons in subsequent to those non-significant study results.

The most significant result of these scientific attempts is that we must focus on how technological processes and tools are integrated into teaching-learning environments rather than how much technology is utilized in those environments. Therefore, the history of technology in education might be summarized in one sentence; just bringing the technology, no matter how much it is qualified, into instructional settings and allowing it to be used by the teachers or students mean nothing in terms of learning efficiency. Stakeholders of educational activities must spend more time and energy on technology-enriched contexts so that the return-on-investment will be maximized (Huber, 2005). Otherwise, technology implementation will not be provided in a broad sense.

Instructional Technology is a set of systematic and planned activities to arrange learning and teaching environments for that maximization purpose. In 1994, Seels and Richey defined the field of Instructional Technology “... as theory and application of design, development, utilization, management and evaluation of processes and resources for learning and teaching” (p.1). Such a definition of Instructional Technology comprises each and every individual before, during, and after the related processes and all the Information and Communication Technologies (ICTs) in both micro and macro levels. Each country spends a great amount of money for technological investments. Out of that budget, a huge percentage is dedicated to educational use of technologies in schools, universities or any other institutions.

Improving the efficiency and the generalization of information and communication technologies’ usage in education are the ultimate aims of each national development plan. In all levels of education, instructors are encouraged to utilize audio-visual tools in their teaching activities; such as, computers, televisions, videos, overhead projectors, and etc. As Roblyer (2003) identified, the crucial duty of our modern teachers is to establish and to put the effective technology integration plans into practice. Hence, schools and universities are provided with the Internet connections and information technology classrooms for computer-aided-instruction. For instance, according to Eurydice (2008) which is an information network on education in Europe, for the years 2006-2007, Turkey has provided 294.000 computers for its schools, information technology classes for 19.000 schools and ADSL type Internet connection for 25.000 schools. However, in year 2005, 48 students shared one computer in schools where this ratio is decreasing each fiscal year.

Planning is the most vital tool for managing these investments issues on education (Roblyer, 2003). “Instructional technology planning”, as a tool of instructional technology, is a technique

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