Chapter XXX

An Examination of ICT Planning Maturity in Schools: A Stage Theory Perspective

Julie Mackey
Christchurch College of Education, New Zealand

Annette Mills
University of Canterbury, New Zealand

ABSTRACT

Information and communication technology (ICT) has the potential to revolutionize teaching and learning as well as school administration, yet little is known about the maturity of ICT planning in schools and the manner in which schools plan for the acquisition and use of these technologies in the educational environment. However, as school investments in ICT increase and they become more reliant on ICT, effective planning becomes more central to schools' ability to maximize their use of technology. This research examines ICT planning in schools and proposes a four-stage model of the evolution of ICT planning maturity in schools. The model emerges from case studies conducted in eight New Zealand primary schools and provides insight into the nature of ICT planning in schools and the factors that contribute to planning maturity.

INTRODUCTION

Information systems (IS) planning[1] and the degree to which that planning is clearly linked into an organization's strategic goals have been widely recognized as key factors in the successful use of information technology (IT)[2] within the organization (see, for example, Watson et al., 1997). While many organizations in our community are pursuing these objectives, little is known about the extent or effectiveness of IS planning in schools, particularly in terms of meeting the schools' strategic objectives, even though information and communication technologies (ICT)[3] are now widely used in educational settings.

Over a decade ago, Telem (1993) suggested that the use of IT as a management tool in educational contexts was a neglected area of research, particularly in terms of lack of an underlying knowledge base. Although the ensuing years have seen an increased research focus on ICT in educational management, this focus has concentrated more on evaluative analysis of the efficacy of management information systems, computerized school information systems, and specific applications of information technology (see, for example, Barta, Telem, & Gev, 1995; Fung et al., 1997) than on understanding how schools develop their ICT systems and integrate them into their management systems and practices.

ICT planning as it relates to schools can be defined as the process of identifying the information and communication technologies used to support the educational and administrative goals of schools and of deciding how these technologies will be developed and managed (Lederer & Sethi, 1988; Smits & van der Poel, 1996). According to Latham (1998), however, ICT planning of this sort is still in its infancy in schools. His analogy is apt if we assume that schools, like businesses, take time to develop their ICT strategies in a manner that is commensurate with their strategic objectives. In this chapter, we present a study designed to document the evolution of ICT planning maturity in schools, and to identify, in particular, the factors and stages that influence and characterize integration between ICT planning and educational strategy. From our results, we suggest a common evolutionary pathway for ICT planning in schools and provide a foundation on which to propose a "stages of growth" model for characterizing and evaluating ICT planning in these settings. But before describing our study and the model arising out of it, we consider it useful to give brief accounts of some of the stages of growth models present in IS literature; the ways that schools tend to use ICT to achieve their organizational objectives; and the current state of play regarding ICT usage in educational settings within New Zealand.

Stages of Growth Models

The notion that organizations evolve is encapsulated in various stages of growth models that are widely used in organizational and IS research. In IS literature, these models are based on the premise that organizations move through various stages of maturity in their use and management of IS (Nolan, 1973; Huff, Munro, & Martin, 1988; King & Teo, 1997; Teo & King, 1997). For example, King and Teo (1997) proposed a four-stage model conceptualizing the integration of information systems planning (ISP) and business planning (BP) over time, to better enable the effective support of business strategies. These four stages are as follows:

1. *Separate planning with administrative integration*: In this stage, IS planning is technically oriented and nonstrategic. Performance criteria for the IS function are likely to focus on operational efficiency and cost minimization, and existing work processes may be automated.

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/examination-ict-planning-maturity-schools/7357

Related Content

From Graduate to Employee: The Birth of the Fully Fledged Lecturer – A Case Study of the Teaching Fellows Programme

Paulette J. Annon, Maurice Lukadiand Annette Warner (2021). *Applications of Work Integrated Learning Among Gen Z and Y Students (pp. 211-232).*

www.irma-international.org/chapter/from-graduate-to-employee/275043

Experience as a Catalyst to Student Classroom Learning in Management Education

Maria Sergeevna Plakhotnik (2017). *Innovation and Shifting Perspectives in Management Education (pp. 101-118).*

www.irma-international.org/chapter/experience-as-a-catalyst-to-student-classroom-learning-in-management-education/167931

Utilizing Learner Knowledge in Cross-Culture Management Education: Beneath the Visible Teaching Pyramid

David Starr-Glass (2018). *Handbook of Research on Cross-Cultural Business Education (pp. 140-159).*

www.irma-international.org/chapter/utilizing-learner-knowledge-in-cross-culture-management-education/205948

Faculty Memoirs: Study Abroad Business Program in China

Devi Akella (2018). *Business Education and Ethics: Concepts, Methodologies, Tools, and Applications (pp. 1422-1448).*

www.irma-international.org/chapter/faculty-memoirs/186641

Teaching Peace and Marketing Education: From Pieces to Peace

Maria Lai-Ling Lam (2018). *Business Education and Ethics: Concepts, Methodologies, Tools, and Applications (pp. 895-928).*

www.irma-international.org/chapter/teaching-peace-and-marketing-education/186613