Chapter 37

Developing Creativity and Learning Design by Information and Communication Technology (ICT) in Developing Contexts

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ABSTRACT

This chapter has two aims: 1) to bridge the link between creativity, learning, information ecology, and community of practice that underpins the theoretical necessity of contextual user-centered approach to learning design by ICT in developing contexts; and 2) to specifically discuss how a human-computer interaction for development (HCI4D) based on learning design can be applied to provide the practical instrument for building creative learning environment in developing contexts. Theoretically, the chapter will build a new framework by using three prominent theories: creativity theories, information ecology, and theory of communities of practice. This chapter also has practical contributions to offer developmental scholars and project managers a vocabulary to address the process and learning issues in both formal and informal learning environments and opening up new ways for understanding creativity, learning, and usages of ICT in a developmental context.

INTRODUCTION

This chapter has two aims: (1) to establish the link between creativity, learning, information ecology and community of practice that underpins the theoretical necessity of a contextual user-centered approach to learning design for ICT in developing contexts; and (2) to specifically discuss how a Human Computer

Interaction for Development (HCI4D), based on learning design, can be applied to provide the practical instrument for building creative learning environments in developing contexts. Accordingly, the chapter will develop a new theoretical framework by using three prominent theories: creativity theory, information ecology, and the theory of communities of practice. This chapter also offers practical contributions to developmental scholars and project managers in the form of a vocabulary to address the process and learning issues in both formal and informal learning environments, and by opening up new ways of understanding creativity, learning and usages of ICT in a developing context.

BACKGROUND

Generally, the term creativity means to develop new and useful ideas (Amabile, 1996). The development of different perspectives in describing creativity has been traced from the focus of the 1950s to the 1970s on areas of personality, cognition and the stimulation of creative individuals, to the awareness in the 1980s and 1990s of the influence of environments and social contexts on the creativity of individuals, groups and organizations (Loveless, 2007). In addition to discussion of the characteristics of novelty, effectiveness and ethicality (Cropley, 2001), the current creativity discourse also encompasses (1) operating in the economic and political field, (2) acting as a possible vehicle for individual empowerment in institutions and organizations, and (3) its use in developing effective learning (Jeffrey & Craft, 2001). Creativity is, therefore, now discussed as "a good thing", promoting both personal expression and enhancing opportunities to engage in the complexities of problem-solving in the economic and cultural landscape of the 21st century (Loveless, 2007).

The uses of information communication technology (ICT) to support creativity by learning design have been described, reviewed and theorized in a range of published work in recent years (Loveless et al., 2006). ICT can be seen as a set of tools, which can be chosen as and when they are appropriate to creative processes. It can be argued that the characteristics of ICT can also make a distinctive contribution to those processes, providing new tools, media and environments for learning to be creative and for learning through being creative (Loveless, 2007). In particular, the use-centered approach to learning design by ICT can be viewed as a potential strategy to promote learners' creative thinking skills and to improve learning abilities (Purushothaman, 2013). As explored by the domestication theory, the arrival of ICT in homes has brought with it the mobilization of material resources, skills, cultural values and social competences and capabilities. The recent rise of social media is also having an influential impact on organization innovation. These applications have shifted the way that users seek information and create and connect knowledge (Loveless, 2007). In developing contexts, designing learning for creativity by ICT should be paid more attention than in developed contexts due to the complex technical, economic, social and cultural problems.

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