Understanding Information and Communication Technology Diffusion in Developing Countries

TREO Talk Paper

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Abstract

Information and Communication Technologies (ICTs), in the context of education, refer to the integrated set of technologies including computers, the Internet, broadcasting technologies, and telephones that facilitate not only delivery of instructions, but also the learning processes (Khan et al., 2012). ICTs have become pervasive in various facets of human endeavors as they play integral roles in many fields including education, business, healthcare, entertainment and even everyday life. The diffusion of technology and information, however, varies globally contributing to "digital divide" across countries worldwide, caused due to barriers in different aspects of access such as: lack of elementary digital experience among users caused by lack of interest, computer anxiety, and unattractiveness of the new technology ("mental access"); no possession of computers and network connections ("material access"); lack of digital skills caused by insufficient user friendliness and inadequate education or social support ("skills access"); and lack of significant usage opportunities ("usage access") (Van Dijk & Hacker, 2003).

In this work, we plan to examine skills access and usage access with respect to ICT diffusion in developing countries. We focus on the transition of graduate students from a developing to a developed country for higher education. Recognizing the barriers of access in ICT diffusion in developing countries would allow us to gain a deeper understanding on the difficulties that international graduate students encounter in transitioning from their home (developing) country to a different (developed) country with the use of technology in educational settings. We aim to investigate the concerns and technology considerations regarding educational ICTs when graduate students plan to migrate. By understanding the user aspects of the “digital divide”, we plan to address some barriers by recommending measures to the universities as well as students to enable a better transition technology-wise, to their intended country of migration.

Although there are potential benefits of ICTs in education, due to the challenges in the integration of ICTs in education faced by developing countries, the levels of ICTs adoption and diffusion in these countries are different – resulting in diverse experiences of international students. Understanding the transition barriers for international students and the current resources provided by the universities to aid their transition can inform the design of training packages on ICT use. Developing improved resources would then lead to an easier decision making process about the university, smoother acculturation to a new environment, and consequently result in a higher academic performance of international students.

References