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Guest Editorial: Special Issue of Comparative & International Education Society (CIES) ICT4D Special Interest Group

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Welcome to Volume 10 Issue 2 of the *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*. This issue highlights the work from members of the Information and Communication Technology for Development (ICT4D) Special Interest Group (SIG) of the Comparative & International Education Society (CIES).

Kang lays the groundwork for this SIG by researching the prevalence of ICT4D at CIES conferences. In "Revisioning Information and Communication Technology for Development (ICT4D) at the Comparative & International Education Society (CIES): A Five-Year Account (2009 - 2013)", Kang provides an account of how ICT has evolved as a key topic and research area at the CIES conference. The past five years' CIES conference papers with an ICT component are reviewed for common development trends, opportunities, and challenges. The findings include: 1) ICT has a strong presence at CIES; 2) Countries from Asia, Africa, and Northern America regions have been the major contributors to CIES; 3) Educational institutions, private and professional organizations, and companies have been the key ICT4D players at CIES; 4) The interaction between ICT and other areas has been established; and 5) ICT4D SIG is suggested to further claim its role of connecting, building, and strengthening ICT4D community of practice at CIES.

In the article "ICT oriented toward nyaya: Community computing in India's slums", Byker presents a case study of a grassroots effort, called the community computing model, in Bangalore, India. Using Amartya Sen's work on nyaya and Paulo Freire's work on conscientization, the author explains how this model of community computing infused and developed a social justice oriented and deeper "critical consciousness" of the slum community where this computer center was situated.

In Byker' second article, "Sociotechnical narratives in rural, high-poverty elementary schools: Comparative findings from East Texas and South India," he compares case studies of computer technology use at two rural elementary schools across two international settings. Byker's study uses the Social Construction of Technology (SCOT) theory to guide a comparative investigation of how elementary school teachers and students in East Texas and South India construct meaning for computer technology. Byker found that even though the two settings are far apart geographically and culturally, a similar sociotechnical narrative emerged. The sociotechnical narrative includes: (1) A shared hope in the opportunity and possibilities with computer technology, (2) the development of literacy skills, and (3) similarity in knowledge tasks for the future.

Lee and Sparks take an ethnographic approach to exploring telecenters in Nepal. In "Sustaining a Nepali telecenter: An ethnographic study using activity theory", the authors explore tensions youth face when using a telecenter located in Sankhu, Nepal, a Newari village 20 kilometers southeast of Kathmandu. Tensions are categorized in order of frequency as they appeared in the data. Major tensions included gender norms, generational distrust, lack of awareness, and

funding. Moderate tensions included lack of training and time. Minor tensions were location, power, and connectivity.

In the article "Unsystematic technology adoption in Cambodia: Students' perceptions of computer and Internet use", Richardson, Nash, and Flora set out to understand how upper secondary school students in Cambodia perceive the use of computers and the Internet. Using questionnaires, data were collected from students in three urban upper secondary schools (n=1,137) in Cambodia. The data indicate that the more exposure a Cambodian student had to computers and the Internet the more favorable their attitudes were toward these technologies. Additionally, students with limited exposure to these technologies were more likely to have increased anxiety about using such technologies. The findings are discussed using Rogers' conceptualization of the Diffusion of Innovations theory. This study is the first of its kind aimed at understanding the perceptions and use of digital technology by Cambodian upper secondary students.

In their article, "ICT and instructional innovation: The case of Crescent Girls' School in Singapore", Shear, Patel, Trinidad, Tan, Hoh, and Png describe a global professional development program called 21st Century Learning Design (21CLD). This program helps teachers design academic lessons that integrate opportunities for students to develop 21st Century competencies in a variety of dimensions such as collaboration, knowledge construction, and the powerful use of ICT for learning. The paper highlights the example of Crescent Girls' School in Singapore, which is implementing this program school-wide as a next step on its longstanding journey to leverage ICT for instructional innovation. The paper describes the results for teaching and learning through a communicative arts lesson that leverages place-based ICT tools for student knowledge construction.

In the article, "The effect of using XO computers on students' mathematics and reading abilities: Evidences from learning achievement tests conducted in primary education schools in Mongolia", Yamaguchi, Sukhbaatar, Takada, and Dayan-Ochir discuss the One Laptop per Child (OLPC) project in Mongolia. This paper presents the findings of a study conducted in 2012 to evaluate the impact of the OLPC initiatives on students' literacy and math skills. This study covered 14 primary schools, of which 7 received laptops and 7 did not received laptops. Over 2,000 fifth grade students in these 14 schools were tested on math and reading skill using items from the 2008 National Primary Education Assessment. In addition to these tests, students were asked to respond to a questionnaire, which consisted of demographic and ICT-related questions and computer attitude measure for young student instrument. The findings of the study indicate that the use of XO computer may have enhanced students reading skills controlling for gender, math scores, hours spent for watching TV, doing homework, and earning money.

Light and Pierson wrote "Increasing student engagement in math: The use of Khan Academy in Chilean classroom." In August of 2013, the researchers traveled to Santiago, Chile to conduct research in five schools where teachers were using Khan Academy. Light and Pierson found that the way Khan Academy functions as a digital learning environment changes the ways and the degree to which students engage with and are engaged by the math content; it also changes the way teachers and students interact with each other. The authors conclude that the Khan Academy's straightforward approach of providing an endless bank of practice exercises makes it an inviting and universally adaptable tool across different types of teachers, classrooms, and countries.

Pouezevara, Mekhael, and Darcy wrote "Planning and evaluating ICT in education programs using the four dimensions of sustainability: A program evaluation from Egypt." In this article, the authors present the findings from a program evaluation of an ICT in education project within the USAID-funded Girls Improved Learning Outcomes (GILO) program. The evaluation used a

framework of four dimensions of ICT sustainability to examine the appropriateness of the design and implementation of the project, which provided simple, relevant technology to 166 schools in Upper Egypt. The findings suggest that ICT in education projects must favor neither the hardware nor the pedagogical aspects of the technology. Instead they layer the pedagogical use of technology on top of a deliberate technology infrastructure. The technical and pedagogical aspects of the program should be treated as two distinct efforts with separate but complementary goals. Paying attention to social, political, economic, and technological dimensions during the process can make a difference in sustainability and, ultimately, success of the initiative.

Finally, Porcaro and Carrier developed "Ten guiding principles for designing online modules that involve international collaborations." The authors detail how there are many opportunities for instructional designers to collaboratively design online modules with international teams. These collaborations can take many shapes, as have various levels of localization. Porcaro and Carrier thus present ten guiding principles that are shaping the work of an online module development project for training in-service teachers in Jordan.

We hope the readers enjoy this special issue of IJEDICT. To find out more about the ICT4D SIG, the Comparative & International Education Society, or the annual conference, please visit us online (www.cies.us).

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Original article at: http://ijedict.dec.uwi.edu/viewarticle.php?id=1833