FIRE: Forum for International Research in Education

2015

Redefining Technology in Development Work: A Need for Learning Outcomes in ICT Projects

Jayson W. Richardson
University of Kentucky, jayson.richardson@uky.edu

Gregory Sales
Seward Inc., gsales@sewardinc.com

Recommended Citation

Redefining Technology in Development Work: A Need for Learning Outcomes in ICT Projects

Abstract
Redefining Technology in Development Work:

A Need for Learning Outcomes in ICT Projects

Jayson W. Richardson

Gregory C. Sales

Technology has redefined, and will likely continue to redefine, educational processes and procedures around the world. In many development efforts, however, the focus is on the hardware, software, or professional development. Rare is the international development project focused on teaching and learning. In this special issue of the *Forum for International Research in Education (FIRE)*, we propose a reframing of ICT by shifting the paradigm to focus on **I**nstructional quality, **C**urriculum development, and **T**eaching pedagogy. Thinking of ICTs in this I-C-T context moves the discussion away from the technology itself, and spotlights changing and improving teaching and learning. In this special issue the Information and Communication Technology for Development Special Interest Group (ICT4D SIG) of the Comparative and International Education Society (CIES), solicited articles that focus on improving and measuring teaching and learning outcomes in technology-focused development projects.

Keywords
ICT, introduction, CIES

GUEST EDITORS' INTRODUCTION

Jayson W. Richardson[1]
University of Kentucky, USA

Gregory C. Sales
Seward Incorporated, USA

Technology has redefined, and will likely continue to redefine, educational processes and procedures around the world. Technology can: help government agencies become more effective by tracking and monitoring educational outcomes; help school leaders become more efficient at managing and leading organizations; help teachers present information better; provide educators with vast opportunities to upgrade their skills; and help engage students in the learning process. In less developed countries, one would be hard pressed to find an educational project that does not include some aspect of information, communication, and technology (ICT) in the development effort. In fact, an increasing number of educational development projects and programs are specifically focusing on how ICTs can be used to improve teaching and learning processes.

In many development efforts, however, the focus is on the hardware, software, or professional development. Rare is the international development project focused on teaching and learning. In this special issue of the *Forum for International Research in Education* (*FIRE*), we propose a reframing of ICT by shifting the paradigm to focus on Instructional quality, Curriculum development, and Teaching pedagogy. Thinking of ICTs in this I-C-T context moves the discussion away from the technology itself, and spotlights changing and improving teaching and learning. In this special issue the Information and Communication Technology for Development Special Interest Group (ICT4D SIG) of the Comparative and International Education Society (CIES) solicited articles that focus on improving and measuring teaching and learning outcomes in technology-focused development projects.

Instructional Quality

The Piper, Jepkemei, Kwayumba, and Kibukho article is titled "Kenya's ICT Policy in Practice: The Effectiveness of Tablets and E-Readers in Improving Student Outcomes." In this article, the authors set out to explore whether three different ICT interventions would improve pupil outcomes in Grade 2 while monitoring cost-effectiveness. The authors compared various technology hardware configurations as well as professional development interventions. One key element of this study was to investigate how instruction might be impacted by the choice of curriculum, technology, and training. This study adds valuable data to the field by

---

[1] *Correspondence*: Jayson W. Richardson, University of Kentucky, Department of Educational Leadership Studies, 111 Dickey Hall, Lexington, KY 40506, USA; Email: jayson.richardson@gmail.com

understanding the interplay among technology for teachers, technology for students, and professional development.

An additional contribution that focused on instructional interventions was offered by Lee and Sparks in a piece titled "Patterns of Indigenous Learning: An Ethnographic Study on How Kindergartners Learn in Mana, Fiji." The authors look at the learning processes that take place in one kindergarten in Fiji. By using the Multiple Intelligences Framework and the 21st Century Skills Framework, the authors attempt to understand how introducing iPads into the classroom changes the culture of learning and teaching. Lee and Sparks take an ethnographic approach and present the reader with a snapshot of the learning style. The authors will extend this data into a longitudinal study to understand long-term impacts of technology use on early grade students.

Curriculum Development

For this special issue, Parvin and Salam contributed "The Effectiveness of Using Technology in English Language Classrooms in Government Primary Schools in Bangladesh." The authors focused on monitoring the implementation of supplementary e-content that was based on the national curriculum. The authors set out to explore if the e-content curriculum impacted student learning and / or teaching practices. By presenting data on achievement as well as perceptions from teachers and students, the authors were able to better understand how professional development, monitoring, and assessment might improve technology interventions.

Teaching Pedagogy

Richardson, Sales, and Sentočnik wrote an article titled "Plans for Embedding ICTs into Teaching and Learning through a Large-Scale Secondary Education Reform in the Country of Georgia." This article focuses on all three aspects of technology interventions (instructional quality, curriculum development, and teaching pedagogy). The article, however, is based on a national reform project aimed at changing teaching pedagogy in STEM subjects. The authors take a systemic approach and discuss how ICTs can be embedded into a large national reform project aimed at changing teaching practices. The authors describe proactive efforts that plan for monitoring how technology solutions change teaching, learning, and leading processes.

FIRE is dedicated to presenting evidence-based and innovative change in educational systems. The articles in this special issue serve to help scholars think about ways to measure ICT outputs and outcomes in ICT projects and foster systemic planning through and with ICTs. In the end, we believe technology can be a powerful catalyst for change. However, we also believe that the field needs to measure those constructs that we want to impact rather than use of technology itself. By having technology initiatives focus on a different set of I-C-Ts (Instructional quality, Curriculum development, and Teaching pedagogy) we create more opportunities for growth and change for students, teachers, leaders, and systems.