Identifying teacher, school and district characteristics associated with elementary teachers' use of technology: a multilevel perspective

Laura M. O’Dwyer, Michael Russell, Damian J. Bebell

Abstract

Over the past decade, investment in technology for schools has increased at a dramatic rate. Although policy makers are eager to understand the ways in which technology use in schools is affecting student learning, we believe that a critical preliminary step toward assessing the impacts of technology on teaching and learning requires the examination of the varied uses of technology in schools as well as the contexts that are likely to affect the use of technology in the classroom as a teaching and learning tool. Previous research examining technology use has focused on teacher characteristics and has neglected to explore the potentially alterable, organizational characteristics that may be affecting the adoption and use of technology in the classroom. In light of this argument and using survey data collected from 1490 elementary classroom teachers in 96 schools in 22 Massachusetts districts, this research examines how technology is being used by elementary school teachers, and examines the school and district organizational characteristics that are associated with increased use of technology as a teaching and learning tool. In addition to examining technology-use as a multi-faceted construct, using multilevel regression techniques this study provides evidence that schools’ organizational characteristics are associated with teachers’ use of technology in the classroom. Organizational characteristics such as districts’ and schools’ leadership practices and emphasis on technology, the type and amount of technology-related professional development available to teachers, as well as the amount of technology-related restrictive policies in place were found to be associated with the four measures of teachers’ use of technology examined in this study. Individual teacher characteristics such as constructivist beliefs, higher confidence using technology and positive beliefs about the efficacy of technology were each found to be associated with increased use of technology in the classroom.

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Discussion

Laura M. O'Dwyer

University of Massachusetts—Lowell

Laura O’Dwyer is an Assistant Professor in the Graduate School of Education at the University of Massachusetts Lowell. Her research interests include international comparative studies, the effects of organizational characteristics on individual outcomes, and imputation procedures. Recently, her work has focused on international tracking practices using TIMSS data, NAEP sample exclusion policies, and the impacts of school organizational characteristics on student learning outcomes.
Identifying Teacher, School and District Characteristics Associated with Elementary Teachers’ Use of Technology: A Multilevel Perspective. Article. Full-text available. In addition to examining technology-use as a multi-faceted construct, using multilevel regression techniques this study provides evidence that schools’ organizational characteristics are associated with teachers’ use of technology in the classroom.