Chapter XI

Research in the Pacific:
Utilizing Technology to Inform and Improve Teacher Practice

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Abstract

Pacific Resources for Education and Learning (PREL) Regional Educational Laboratory (REL) initiated the Pacific Communities with High-performance In Literacy Development (Pacific CHILD) research project in response to an overwhelming need in PREL’s service region to improve teachers’ knowledge and instructional practices in early reading. A conscious effort was made to use indigenous knowledge while at the same time satisfy the federal requirement of adhering to a set of rigorous methodological standards. The research design is a balance of scientific research methodology and the incorporation of cultural, language, political, social and environmental realities of the Pacific. This chapter highlights some of the technological methods used to collect data from staff members who provided on-site professional development. Data was also collected via video cameras that offered immediate feedback to teachers regarding strategies acquired during professional development activities. Also described are the rewards and potential pitfalls of utilizing technology for both formative and summative use.
Introduction

PREL is an independent, non-profit organization that serves the educational community in the United States- (U.S.) affiliated Pacific islands, the continental U.S., and countries throughout the world. One of PREL’s largest programs is the REL, funded by the Institute of Education Sciences (IES) through the U.S. Department of Education. PREL seeks to bridge the gap between research, theory and practice in education and works collaboratively with schools and school systems to provide services that range from curriculum development to assessment and evaluation. The REL contract is primarily a research endeavor that consists of six tasks that focus on supporting the efforts of Pacific region entities, districts, schools, communities, institutions of higher education and others to develop high-performing learning communities in the region.

The region served includes 10 U.S. affiliates in the Pacific region (i.e., American Samoa; Commonwealth of the Mariana Islands (CNMI); Federated States of Micronesia (FSM), which are Chuuk, Kosrae, Pohnpei, Yap; Guam; the state of Hawaii; the Republic of the Marshall Islands; and the Republic of Palau), whose political status ranges from statehood to free association. In addition to economic and political diversity, these Pacific entities are characterized by a multiplicity of cultures and languages. At least nine different Pacific cultures are prominent in the region. The languages of instruction in the region’s schools include English, as well as a dozen or more Pacific languages. In the region outside of Hawaii, there are approximately 410,183 students attending 446 schools, including private institutions.

The academic achievement of children whose first language is not English has long been a major educational concern. Those who come from cultural and linguistic minority backgrounds have been shown to fall short in school achievement. Measured through grading, retention in grade level, teachers’ judgments of student ability and standardized tests, the academic performance of limited English proficient students generally lags behind other elementary school students (Moss & Puma, 1995). Other mitigating factors further contribute to the region’s literacy dilemma, including lack of sufficient pre- and in-service training for teachers, lack of materials in local and English languages, unclear reading content standards and shifting orthographies in Pacific languages. With the institutionalization of accountability measures mandated by the No Child Left Behind (NCLB) Act of 2001, the pressure to provide high-quality education for our students has been made explicit.

Many students in the region are not learning to read in part because their teachers lack adequate preparation in content, and pedagogical knowledge and skills to teach effectively. Poor teacher preparation is a general education problem, but it is particularly relevant to those who teach reading. Significant numbers of teachers in the Pacific language-dominant entities hold only a high school diploma or associate’s degree. These numbers are not surprising, since the minimum requirement to teach in most of these entities is a high school diploma (see Table 1).

In a study of teacher education and reading instruction released by the National Reading Panel (NRP) (n.d.), the panel drew the following conclusions:

> Based on the analysis, the NRP concludes that appropriate teacher education does produce higher achievement in students. Much more must be known about the conditions under which this conclusion holds. Some issues that need to be resolved include determining the optimal combination of preservice and inservice experience, effects of preservice experience on inservice performance, appropriate length of interventions for both preservice and
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