Research Abstracts ☐ Eric Plotnick, Editor

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Measures of Technology Integration

Measures of Teacher Stages of Technology Integration and Their Correlates with Student Achievement. Rhonda Christensen, Darlene Griffin, and Gerald Knezek. 2001. 19pp.

Two self-report measures of technology integration are introduced along with a formal model illustrating their utility as outcome measures for level of technology infusion in classroom environments. Findings from two Texas studies involving (a) more than 500 teachers from a large metropolitan school district; and (b) technology expenditures from a random sample of 100 Texas school districts illustrate that technology integration as measured by Stage of Adoption can be predicted with high accuracy based on secondary school teachers' self-reported will, skill, and access to technology tools; higher classroom technology integration as measured by Concerns-Based Adoption Model Level of Use is positively associated with higher average elementary school classroom scores in Iowa Test of Basic Skills Vocabulary, Reading, and Writing; and average school district Scholastic Aptitude Test scores can be reasonably well predicted based on knowledge of district level technology expenditures. The paper proposes that the Will, Skill, Tool Model of Technology Integration warrants further testing in additional large-scale studies. *Available from EDRS as ED 451 187.*

Digital Divide in Tribal Schools

The Digital Divide in Native American Tribal Schools: Two Case Studies. Abdul Azeez Guice and Leah P. McCoy. 2001. 7 pp.

This study examined utilization of digital resources at two different Native American tribal schools, one located in the Southwest and another in the Northwest. Ethnographic methods were employed in the study to explore the cultural issues involved in the use of computers in the tribal schools. Site visits of the two schools were conducted. Observations on the reservations and in the schools provided a picture of reservation life and current computer usage. Extensive interviews with administrators and teachers in the schools revealed information about the deeper cultural issues underlying the reasons for tribal choices relating to computer use. Findings indicated that the most important issue affecting technology use in these two tribal schools involved tribe attitudes toward education. The biggest differences between the two tribes were observed to be the commitment from the administrators and each tribe's value of education. Administrators in the tribal high school at the Southwest reservation were committed to improving and bringing more resources to the school. With the exception of the one technology instructor, the same observation was not made at the Northwest reservation. The author concludes that the digital divide is not so much caused by lack of funds and materials as it is by difference in cultural values. *Available from EDRS as ED 454 848.*

Role of the Educational Technologist

Investigating the Significance of the Role of the Educational Technologist in Middle School Environments: A Qualitative Study. Stephanie Davidson, Melissa Nail, Beth Ferguson, Michael Lehman, and R. Dwight Hare. 2001. 15 pp.

This paper is a report of a study of a federally funded technology innovation grant, C*R*E*A*T*E for Mississippi. Qualitative techniques were used to examine the significance of the role of a school-based educational technologist (ET) in four middle schools. The study also examined the impact of the qualifications that the ET possesses on the effectiveness of the project. Data were collected through observations, interviews, and document analysis. Preliminary results indicate that knowledge of technology alone does not make a successful ET. Results show that ETs with a background in the middle school setting have a greater impact than ETs without such a background. *Available from EDRS as ED 453 787.*

Teachers' Access to Internet Resources

An Examination of Digital Dividing Factors on Teachers' Access to Internet Resources in Rural Schools. Jianjun Wang, Toni Briegel, David Goodwin, Amy Patrick, Steve Broidy, Susan Breck, Sanjeevani Joshi, and George Calhoun. 2001. 13 pp.

A study examined technology gaps in rural schools and computer accessibility and Internet use by teachers. Findings from surveys of 205 teachers in the rural Ozarks region of Missouri indicate significant differences in Internet accessibility among rural schools with a low, middle, or high technology status; and no significant interaction effects on teacher Internet use between school technology status and teacher computer accessibility. Upgrading school technology was a significant factor in Internet utilization; and technology upgrading was a key factor in rural school improvement. The lack of a significant gap in Internet use between teachers who had access to computers at zero versus one location suggests that without computing facilities both at teachers' homes and at schools, technology investment at school is unlikely to result in substantial improvement of Internet utilization by teachers. Significant differences in Internet use among teachers who had computer access at more than one location indicates that given teacher ownership of computers at home, having multiple convenient locations for Internet use within schools encourages teacher Internet use. Recommendations include making computers more available to teachers and providing professional development activities that enrich teacher knowledge of computer and Internet use. (Contains 11 references, 2 tables, and 2 footnotes.) *Available from EDRS as ED 455 041.*