Toward Ubiquitous Computing: An Examination of Laptop Distribution Programs to Teachers & Students

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Abstract: This presentation focuses on examining the efficacy of laptop distribution programs for teachers and students in K-12 schools. Topics addressed include: the research base for recommending the use of laptop computers by educators and students; descriptions of on-going programs; funding mechanisms; expectations for participants; effectiveness of programs; advantages and disadvantages of programs; and recommendations to guide the development and implementation of similar programs. The intent of the presentation is to critically examine ongoing programs and to stimulate discussion regarding the efficacy of laptop programs for teachers and students.

"To have a truly transformational impact on education, technology must become ubiquitous…seamless…and nearly invisible" (Goldberg, 2002, ¶ 1). While the "killer device' with the potential to transform the educational process by enabling one-to-one, personal, ubiquitous computing" that could easily be placed "in the bookbag or on the desk of every student and teacher" (Goldberg, 2002, ¶ 5) is not yet available, experiments are underway to assess the impact of the next best thing, i.e., laptop computers.

Laptop distribution programs for teachers and students take many forms. Some are limited to a single school, while others involve entire school districts. Relatively few are city-wide (Walsh, 2002) and still fewer encompass entire states, with notable exceptions including: Hawaii (Department of Education State of Hawaii, n.d.), Maine (State of Maine, n.d.) and Michigan (Michigan Virtual University, 2002, August 30).

Laptop programs capture the interest of educators, students, parents, the public, and policy makers (Krieger, 1998, January/February). They are announced with great fanfare and often implemented by educators with a mixture of enthusiasm and trepidation. Providing laptops for teachers and students is a costly endeavor and often come with strings attached. Laptop distribution programs are also not without their critics who argue that the hardware is inadequate, or will be misused, or that the expense does not justify the presumed educational benefits. As more schools, districts, and states explore the possibility of offering laptops to educators and students, it is important to assess their effectiveness and impact on teaching and learning.

This presentation focuses on examining the efficacy of laptop distribution programs. Specific questions to be addressed include: What is the research base for recommending the use of laptop computers by teachers and students? What are the characteristics of the laptop distribution programs? How are they funded? What expectations are associated with them? How are the impacts of these programs being assessed? How successful have these efforts been? What factors should schools, districts, and states consider in determining whether to adopt similar programs? What recommendations can be made to guide the development and implementation of similar programs on the school, district, and state levels? The intent of the presentation is to
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References


