Intel Teach to the Future Preservice Program:
Findings from a Formative Evaluation

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During the winter and spring of 2003, the Education Development Center/Center for Children and Technology undertook a preliminary formative evaluation of the Intel Teach to the Future preservice program. Intel Teach to the Future (http://www.intel.com/education) is a professional development and teacher education initiative focused on improving K-12 teachers integration of technology into their classrooms. This presentation will review findings from this evaluation, and also pose questions, based on these findings, about the opportunities and challenges presented by a coordinated program of preservice and in-service teacher training on the integration of information technologies into K-12 teaching and learning.

About Intel Teach to the Future

The Intel Teach to the Future curriculum focuses on inquiry-oriented and project-based teaching and learning, and stresses the alignment of curricula with standards. The curriculum was prepared by the Institute for Computer Technology (ICT; www.ict.org) and Intel Corporation. The training uses Microsoft software, focusing primarily on how to use Windows-based versions of PowerPoint and Publisher to support students in creating presentations, web pages, brochures and newsletters. The training also discusses pedagogical and classroom management challenges associated with using technology with students, as well as conducting research on the Internet, and intellectual property issues.

The core of the curriculum is the creation of a unit plan, including model student work samples, support materials, and a plan for implementation. This structure allows teachers to expand their technical skills in the context of a curriculum development

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process_ccf. By requiring participants to create immediately relevant materials, the curriculum puts the teachers' interests and concerns at the center of the training experience. (For more information about Intel Teach to the Future, visit www.intel.com/education.)

Intel Teach to the Future was designed to address the overarching goal of the Intel Innovation in Education initiatives: to improve math, science, technology and engineering education worldwide. To achieve this end, the program focuses on two of the four more specific goals of the Innovation in Education initiatives: promoting the effective use of technology in the classroom, and improving science and math education in K-12 schools.

About the preservice program

Intel Teach to the Future was originally designed to be delivered, via a train-the-trainer model, as a 40-hour long in-service professional development course. However, managers of the Intel Teach to the Future program became increasingly aware of the need to not only train practicing teachers, but to ensure that individuals just entering the profession would also be well-prepared to use technology constructively with their students. Consequently, during Spring 2002, Intel project managers decided to offer a slightly different training experience, called a "Curriculum Review," to college and university faculty who teach undergraduate or graduate students studying to become K-12 teachers. Using the same curriculum, Senior Trainers from the Intel Teach to the Future program offered a 40-hour training to teams of faculty from any School of Education who chose to participate. These faculty members agreed to use the curriculum in their teaching, and were encouraged to distribute the 10 modules of the curriculum across various core education courses so that students would be exposed to the curriculum content over an extended period of time and in the context of learning other core content of their area of concentration. Copies of the curriculum were provided at no cost to graduate or undergraduate students whose faculty made use of it in their courses.

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Intel's decision to offer a preservice version of Intel Teach to the Future dovetailed with many universities' participation in a major federal initiative aimed addressing similar challenges: the Preparing Tomorrow's Teachers to Use Technology grants (PT3). In 1999 the U.S. Department of Education made its' first round of grants under this program, funding 225 universities or consortia (which often included K-12 districts, other universities, training organizations, etc.), with a goal of "[supporting] high-quality reforms in teacher preparation programs for the purpose of increasing the knowledge, skills, and abilities of prospective teachers to use technology efficiently in their future teaching practices." Intel staff encouraged faculty participating in Intel Teach to the Future to use this curriculum in concert with their PT3 efforts, and in this paper we will include examples of various ways that universities leveraged Intel Teach to the Future to extent or support their PT3 efforts and to meet their overall goals of preparing their students to become highly qualified technology-using K-12 teachers.

About the evaluation

The Center for Children and Technology, part of Education Development Center, Inc., has been conducting independent evaluations of Intel's Innovation in Education programs since 2000, with support from a series of grants from the Intel Foundation.. EDC is a nonprofit research and development organization with a staff of more than 600, and conducts a wide range of activities to support human development around the world. CCT, a center within EDC, was founded in 1981 to investigate the roles that technologies can play to support high quality K-12 teaching and learning.

CCT's preliminary evaluation of the preservice version of Intel Teach to the Future built on two prior years of evaluation of the in-service program, which has reached over 400,000 teachers worldwide and over 100,000 teachers within the U.S. since the program began in 2000. This evaluation has used teacher surveys, observations, site visits, and phone interviews to document teacher response to the Intel Teach to the Future training experience and to construct a detailed portrait of how teachers follow up on what they learn in this training. We have demonstrated that teachers follow up on

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what they learn from Intel Teach to the Future, and that the experience effectively supports them in experimenting with new approaches to integrating technology into their students' work.

Our preliminary formative evaluation of the preservice Intel Teach to the Future program both builds on our prior evaluation of the in-service program, and raises new questions about the distinctive needs of preservice and in-service teachers, as well as about the opportunities for extending and building program impact by reaching across preservice and in-service boundaries, through mechanisms such as coordinated Professional Development School programs. Intel Teach to the Future provides an important opportunity to examine whether and how preservice and in-service teachers' needs for information technology training can be addressed through a single, coordinated program.

This presentation will both review findings from the surveys, site visits and phone interviews with participating faculty that we conducted as part of our formative evaluation of the preservice program, and reflect on these broader issues about the relation between in-service and preservice teacher education.

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