Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills they need in the 21st century. The 1998 UNESCO World Education Report, *Teachers and Teaching in a Changing World*, describes the radical implications the new information and communication technologies have for conventional teaching and learning. It predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information. It states:

New possibilities are emerging which already show a powerful impact on meeting basic learning needs, and it is clear that the educational potential of these new possibilities has barely been tapped. These new possibilities exist largely as the result of two converging forces, both recent by-products of the general development process. First, the quantity of information available in the world—much of it relevant to survival and basic well-being—is exponentially greater than that available only a few years ago, and the rate of its growth is accelerating. A synergistic effect occurs when important information is coupled with the second modern advance—the new capacity to communicate among the people of the world. The opportunity exists to harness this force and use it positively, consciously, and with design in order to contribute to meeting defined learning needs (1998 UNESCO World Education Report, p. 19).

To effectively harness the power of the new information and communication technologies (ICTs) to improve learning, the following essential conditions must be met:

- Students and teachers must have sufficient access to digital technologies and the Internet in their classrooms, schools, and teacher education institutions.
- High quality, meaningful, and culturally responsive digital content must be available for teachers and learners.
- Teachers must have the knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards.
Teacher education institutions are faced with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices. For many teacher education programmes, this daunting task requires the acquisition of new resources, expertise and careful planning.

In approaching this task it is helpful to understand:

- the impact of technology on global society and the implications for education
- the extensive knowledge that has been generated about how people learn and what this means for creating more effective and engaging student-centred learning environments
- the stages of teacher development and the levels of adoption of ICTs by teachers
- the critical importance of context, culture, leadership and vision, lifelong learning, and the change process in planning for the integration of technology into teacher education
- the ICT competencies required of teachers related to content, pedagogy, technical issues, social issues, collaboration, and networking
- the importance of developing standards to guide implementation of ICTs in teacher education
- the essential conditions for successful integration of ICTs into teacher education
- important strategies to consider in planning for the infusion of ICTs in teacher education and managing the change process.

This document is designed to provide a guide to help teacher educators, administrators and policy-makers infuse, integrate, or embed ICTs into teacher education. The resources were developed by an international group of experts with extensive experience in the integration of ICTs into teacher preparation. The document provides a framework for ICTs in teacher education and describes the essential conditions that must be met for successful technology integration. It offers case studies illustrating the variety of approaches that may be used in integrating ICTs into teacher education and provides guidelines for the development of a high quality strategic technology plan. Lastly, it discusses the importance of planning and managing the change process and building a broad base of support among all stakeholders to achieve the goals of integrating ICTs into the teacher education programme.
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