

TOOLKIT CONCEPT AND BLUEPRINT

Background and Rationale

The world is experiencing a revolution in the dissemination of knowledge and in the enhancement of instruction, through the advancement of information and communication technologies (ICT). ICT have the potential to enhance information distribution, teaching and managing of educational services and make them affordable and available anytime and anywhere. ICT also have great potential for facilitating the fulfillment of educational objectives and for enhancing solutions to educational problems. For example, ICT can expand the reach and quality of delivery systems and empower instructors to become better teachers.

There are various forms of ICT which can be used in education. Technology should not be equated with only computers and the internet; other ICT such as radio and television can be used to enhance teaching and learning. However, forms of ICT differ in their properties, scope, and potential. For example, an audio technology captures sound; video technology depicts sound and motion; a CD provides multimedia digital content in an easily portable form; and a website can have the element of interactivity.

Education policy makers and strategists are faced with demands for more and better education. Yet the availability of financial, physical and human resources is not commensurate with these demands. A linear projection of past progress indicates that business as usual will not achieve desired targets within reasonable time. This may place some countries at risk of not developing their human capital to a threshold necessary for poverty alleviation, and for sustainable socio-economic development.

Recognizing the advantages that ICT can bring in terms of meeting demands for improved education, educational authorities are under pressure to provide every classroom (if not every student) with ICT equipment, including computers and their accessories and connectivity to the Internet.

The pressures to equip schools with ICT are coming from vendors who wish to sell the most advanced technologies, from parents who want to ensure that their children are not left behind in the technological revolution, businesses who want workers with ICT skills, and from those who see ICT as the latest hope to reform education.

Experience is proving, however, that acquiring the technologies themselves, no matter how hard and expensive, may be the easiest and cheapest step in a series of steps towards utilizing these technologies to improve. It is the integration of these technologies into education systems that is proving most difficult.

It is important to remember that technology is only a tool: no technology can fix a bad educational philosophy or compensate for bad practice. In fact, if we are going in the wrong direction, technology will get us there faster. Providing schools with hardware and

software does not automatically reform teaching and improve learning. And ICT-enhanced education activities should not be perceived as a substitute for teachers or schools. Much depends on educational practices and how ICT are used to enhance them.

Effectively integrating technologies into educational systems is a complicated process. The road from the potential that ICT offers to effective application is a long and sophisticated one that requires deliberate planning, sustained implementation, calculated course modification, and continuous maintenance. This process involves a rigorous analysis of educational objectives; a realistic understanding of the potential benefits that technologies can provide; a purposeful consideration of the pre- and co-requisites for effective ICT use in education; and an awareness of prospects of this integrative process within the dynamics of educational change and reform.

Introducing ICT into the teaching-learning process is sometimes a radical change. Success necessitates meeting all the pre-requisite and co-requisite conditions for innovation and change including building constituencies, relating the innovation to the conventional, articulating the added value of ICT, assessing risks, and planning for change management.

Why develop a Toolkit for Policy Makers?

Education development succeeds or fails on the basis of the nature and quality of educational policies and strategies, and sound implementation practices. Policies for the integration of ICT into educational systems and activities must be developed effectively and strategies implemented wisely. When the process of integrating ICT is arbitrary, ad hoc and disjointed, investments in technologies are wasted.

A comprehensive set of analytical, diagnostic and planning tools (Toolkit) can help policy makers to ensure there is a certain discipline on the implementation process. Such a Toolkit does not make policy formulation “scientific” and “rational”; nor can it replace the political/organizational nature of policy formulation. It will, however, enlighten, enrich and systematize the process of policy making and planning, by:

- Providing the necessary information (about what is known about the potential of ICT use in education and the required conditions for its effective use) and policy options.
- Facilitating deliberate planning for implementation and feedback.
- Allowing for the systematic and constructive engagement of various stakeholders.
- Adding precision and efficiency to the different procedures.

Potential Beneficiaries

The Toolkit can benefit:

- Policy makers in educational institutions: to meet the challenge of introducing and integrating ICT into education.
- UNESCO in its advisory services for Member States
- Officers and specialists of development agencies as they identify, prepare and appraise ICT-in-Education projects or ICT components of education projects

Limitations of the Toolkit

A Toolkit can assist education policy makers, planners and practitioners in the process of harnessing the potential of ICT to meet educational goals and targets.

However, it is important to keep in mind that, like any tool used in any field of science, technology or industry, the Toolkit is only an instrument to facilitate and improve the efficiency and effectiveness of decision making, planning and implementation. It does not replace the commitment, brainpower and actions of the user, nor does it make up for deficiencies in these attributes. It is how the toolkit is used and with what skill that determine the results.

As the old proverb says, “Only a bad workman blames his tools”.

About the UNESCO ICT in Education Toolkit

The UNESCO ICT in Education Toolkit provides education strategists with six toolboxes – containing a total of 18 tools – that cover the following areas:

- Mapping the present situation in terms of national goals, educational context, ICT in education, and the dynamics of change.
- Identification of educational areas for ICT intervention and formulation of corresponding ICT-in-Education policies.
- Planning for implementation of infrastructure, hardware, and personnel training.
- Planning for contentware.
- Consolidating implementation plans and their financial and managerial implications into one master plan.
- Assessment of implementation, effectiveness and impact of ICT interventions and subsequent adjustments and follow-up actions.

Toolkit Blueprint

The Toolkit is made of six toolboxes and one reference handbook. The content is listed below and schematically depicted in a flow chart.

Toolkit Contents:

ICT for Education: A Reference Handbook

Part 1 - Decision Maker's Essentials

Part 2 - Analytical Review

Part 3 - Resources

Part 4 - PowerPoint Presentation

Toolbox 1 - Mapping of Present Situation

Tool 1.1 - Mapping of National Vision, Goals and Plans

Tool 1.2 - Mapping of Educational Context

Tool 1.3 – Mapping of ICTs for Education

Tool 1.4 - Analysis of Dynamics for Change

Toolbox 2 – Development of an ICT-enhanced Policy Programme

Tool 2.1 - Identification of Educational Areas for ICT Intervention

Tool 2.2 - Formulation of ICT Policy Interventions

Toolbox 3 - Planning for Implementation: Physical and Human Requirements

Tool 3.1 - Planning for Infrastructure

Tool 3.2 - Planning for Hardware

Tool 3.3 - Planning for Personnel Training

Toolbox 4 - Planning for Implementation: Contentware

Tool 4.1 - Contentware Requirements

Tool 4.2 - Identification and Evaluation of Existing Software

Tool 4.3 – Exploration of the Web for Educational Content

Tool 4.4- Evaluation of Course Authorship and Management Systems

Tool 4.5 - Design, Development, and Testing Curricular Contentware

Toolbox 5 - Planning for Implementation: Summation

Tool 5.1 - Cost and Finance

Tool 5.2 - Master Plan

Toolbox 6 – Assessment and Subsequent Actions

Tool 6.1 - Evaluation of ICT Intervention

Tool 6.2 – Adjustment and/or Scaling Up

Flow Chart

