

# ICT and Changing Mindsets in Education / *Repenser l'éducation à l'aide des TIC*

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## PREFACE

Information and communication technologies (ICT) constitute an assembly of facilities used for the treatment, modification and exchange of information. Their application and areas of implantation are diverse and present in almost all spheres of human activity. Among the different technologies for information and communication, the computer and the internet represent privileged means of learning and teaching as they permit wide and rapid exposure to the world as well as enhanced pedagogical practices. These technologies are believed to contribute to the amelioration of the quality of education because they are not only used as tools for the facilitation of cognitive development of learners but also as a means for exposure by their users.

This collection of papers focuses on practical examples in the integration of ICT in education in developing countries with data from a transnational study on the integration of ICT in West and Central Africa. The main objective of the study was to better understand within the context of African countries the conditions which favour the integration of ICT in schools and their impact on the quality and development of education. In spite of recognized advantages of using ICT in education, pedagogues still have questions such as how we can best introduce ICT in schools, what conditions favour their integration, and what are the pedagogical and psychological consequences?

Claire IsaBelle (2002),<sup>1</sup> states that teachers do not adhere to innovation except when they see the benefit for their pupils and themselves. The use of innovation will progress if teachers receive the necessary information and assistance which they consider useful and important. The behaviourist theory considers learning as change of behaviour and learning takes place when an individual produces a correct response or manifests an expected response to a given stimulus. Behaviour is determined by environmental conditions because according to the behaviourists the human being is passive and it suffices to manipulate environmental conditions to obtain required behaviour. The cognitivists look at a new approach to explain learning through the treatment of information. Cognition can be considered as internal activities and processes inherent to the acquisition of knowledge, information, memory, thinking, creativity, perception as well as understanding and problem solving.

Thanks to the internet, television, CD ROMs, and other media, children today know many things that their parents did not know at their age. The world has been reduced considerably and children are impregnated with all kinds of cultures which tend to affect positively the perspectives of today's youths if responsibly used. In matters of education, the constraints in terms of time and money, motivation, technical and pedagogical training as well as accessibility to the computer, equipment and the need for a pertinent content are constantly at the centre of the debate.

As a matter of fact, for ICT to be productive in teaching and learning processes it is not enough to put one or many computers at the disposal of pupils. The introduction of ICT in schools necessitates a profound reflection on the part of teachers and decision makers in terms

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<sup>1</sup> IsaBelle, C. (2002). *Regard critique et pédagogique sur les technologies de l'information et de la communication*. Montréal : Éditions Chenelière / McGraw-Hill.

of the pedagogical conditions to be put in place and their implication on the quality of education.

That is exactly what is contained in this ERNWACA collection of papers. It discusses teachers' and students' readiness for the integration of ICT in the school system, the impact of ICT as innovation in education, the management of the integration process including gender differentials in the use of ICT in school from cognitive perspectives. The authors of the various papers bring into this new pedagogical tool their wealth of experience as researchers, teachers and users of ICT in education.

The findings and discussions contained in the various papers are comprehensive with innovative, scientific and pedagogical insights. It is important for all who read this book – teachers, students, administrators and organisers of educational systems – to perceive the importance of ICT in quality education. The papers are well researched, pedagogically innovative and intellectually stimulating and the book will no doubt act as a reference document for the integration of ICT in the educational process.

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