Chapter 21
Cyber Capability Framework:
A Tool to Evaluate ICT for Development Projects

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ABSTRACT

This chapter discusses a new theoretical framework, the Cyber Capability Framework, to broaden discussions on ICT for development projects in developing countries from simple growth and access through information infrastructure to an understanding of the complexities involved in the social developments of ordinary citizens. The six dimensions of the Framework, namely, information, technology, process, vision, skills, and management dimension, help in locating the ICT for development projects within the political, economic, and social contexts in particular developing countries.

INTRODUCTION

During the last quarter of the twentieth century, two simultaneous developments across the world have influenced policy makers to invest heavily on Information and Communications Technologies (ICT) for development projects. First, the advent of ICTs successfully influenced decision makers in many less developed countries to adopt ICT for development projects to tackle many of their socio-economic challenges. Second, the World Bank and other western donor agencies have broadened their focus from straightforward economic concerns to policy issues related to the process of governance among their borrower countries. Many less developed countries joined the bandwagon of ICT for development projects to improve efficiency, transparency, accountability,

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and productivity in their respective public service delivery mechanisms. In this context, proper adaptation of information and communications technologies becomes crucial in advancing the goals of the public sector service delivery and in guiding the public sector towards an instrument for social and economic development.

Unfortunately, there is hardly any effort to initiate new frameworks for evaluating this change. The "endless frontier" still looms as the overarching mythology of technology adoption in most economically poor countries (Sarewitz, 1996). ICT for development in general and e-Governance in particular still invokes and endorses the grand myths of endless frontier in science and technology policy. Mere reorganization of funding priorities and bureaucratic structures within the same old political system can hardly address the fundamental paradox that lies at the heart of technological development and progress in society.

The Cyber Capability Framework discussed in this paper raises a central challenge for the field of ICT for development. In general, both the research and practice of systems development have tended to take for granted rather than question the structural distribution of power, authority, knowledge, control, and resources that constitute the institutional contexts of systems development. Given this context for the production and consumption of information and communications technology, it is not surprising that some methodologies construe the interdependent relationship between policy makers and users as a unilateral one. Ignoring this contradiction prevents both researchers and practitioners from understanding, challenging and changing the contradictions inherent in the context and methodologies of ICT for development projects. In the following sections, this paper describes the concepts of the Cyber Capability Framework along with its six dimensions to conceptualize how ICT for development projects can improve the cyber capabilities of ordinary citizens in the developing countries.

ICT FOR DEVELOPMENT: THE DEBATE

An overriding implication of the paradox between progress of technology and progress of society is a difficult problem facing humanity today and is fundamentally different in nature from those a century ago. Providing sufficient supply of basic commodities for the population was the major challenge of human existence in the nineteenth century. But by the end of the twentieth century, the problem of production has been superseded by the challenge of global distribution. Today, this transition from augmenting growth to the challenge of distributing is crucial in all ICT for development projects. The new variable at the heart of this transition is humanity itself, and more specifically, the relationship between humanity and progress of technology. In the industrialized world, the crucial goal of technology has been to reduce the role of humans in the production process. That solves productivity problems but how to integrate that productivity equitably into society becomes increasingly conspicuous. The challenges of integrating humans in ICT for development projects can never be solved merely by expanding breadth of knowledge or by increasing the machines of growth.

Advocates of ICT for development often promise improved quality of public service and wider political participation of the people in implementing various development programs (Garson, 2004). Opponents, however, argue that ICT for development projects have failed in their promise of more effective and democratic public administration (Jaeger, 2005). According to Reddick (2004) ICT for development projects fail because of too much bias on supply-side perspectives ignoring the demands of the targeted people. Helbig (2009) explores the theoretical and practical intersections of e-Governance and digital divide to develop comprehensive and more effective ICT for development policies and implementation strategies. Further, ICT for devel-