Chapter X

The Leapfrog Effect: Information Needs for Developing Nations

Stewart T. Fleming
University of Otago, New Zealand

ABSTRACT

Developing countries have special needs for information and communication. In the rush towards globalization of economies and communications, there is a danger that developing nations will get left behind. If we are to close the gap between the "information rich" and "information poor," then we must take these specific needs into account. This chapter gives an account of some development problems and current initiatives and describes ways in which advancing technology can be manipulated by the developing world to gain social advantage. The term "leapfrog effect" is introduced to explain how advancement can be made in a revolutionary fashion, not incrementally. The chapter draws on the author's direct experiences in Papua New Guinea, but many of the examples given and lessons learnt are applicable to many other developing nations.

INTRODUCTION

"What do I think of Western Civilization? I think it would be a very good idea."
–Mohandas K. Ghandi

A developing country is one that has the potential for economic strength, but lacks skills, capital or technical equipment to immediately exploit its own resources. People of these nations may have poor healthcare, limited education and inadequate nutrition. The developing nations are those at the low- and low-to-medium end of the United Nations Development Index (UNDP, 2002).

Some developing countries are in a post-colonial state of development, or dependencies that are gradually distancing themselves from governing nation-states. The poorest nations are the ones that did not benefit from 19th century globalization (colonization) because they had no resources to be exploited.

The most important aspect of globalization for a developing country is the sustainable management of its own socio-cultural and natural resources. The growth of the Internet as an influence in globalization runs the risk of replacing the diverse cultural resources of individual countries with a few dominating languages and cultures.

Developing countries frequently encounter three different barriers to development: political, technological and social. Development aid requires political will to go ahead and to actually be delivered as intended. However, the spread of technologies such as the Internet and the World Wide Web make information easier to obtain and can span national boundaries. The general populace can be empowered and to an extent, many political problems sidestepped. The deployment of technology can be for monetary gain, or more importantly as highlighted at the recent IT 2002 Summit in Kathmandu (Rao, 2002), can be deployed to solve social problems.

The emphasis on growing social capital rather than monetary-oriented capitalism raises further problems. Investors may be more reluctant to provide funding for projects where they see no direct financial return. Although the developing world represents a large proportion of the world's population, it is not economically strong enough to provide a lucrative market to be exploited.

In the developed world, we have perhaps become used to the constant, rapid change in technology, particularly Information Technology (IT). If the developing world were starting behind the developed nations, how would it ever catch up? The answer lies in the ability to bypass incremental steps on the technology curve – what has been termed here the leapfrog effect. Developing nations can use this effect to their advantage to keep pace with advancements in technology without necessarily incurring the economic impact of incremental change.

SOCIETY AND TECHNOLOGY: ISSUES AND TRENDS

Globalization

Current economic trends are towards globalization of markets, convergence of currencies and consequent alignment in social policies (Zarsky, 1997). For developed nations, international economic union is one way to grow their markets.

11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/leapfrog-effect-information-needs-developing/25808

Related Content

An Undergraduate Student's Case Study on the Use of Educational Technology in Guidance
Ali Mohammed Al-Zubaidi (2025). *Encyclopedia of Information Science and Technology, Sixth Edition (pp. 1-12).*
www.irma-international.org/chapter/an-undergraduate-students-case-study-on-the-use-of-educational-technology-in-guidance/323202

A Data-Driven Analysis on Sustainable Energy Security: Challenges and Opportunities in World Regions
Tat Dat Buiand Ming-Lang Tseng (2022). *Journal of Global Information Management (pp. 1-38).*
www.irma-international.org/article/a-data-driven-analysis-on-sustainable-energy-security/287608

Virtual Organizations in Post-Graduate Education in Egypt
Bernard Kamel (2008). *Global Information Technologies: Concepts, Methodologies, Tools, and Applications (pp. 2550-2557).*
www.irma-international.org/chapter/virtual-organizations-post-graduate-education/19130

Media Platforms and Stock Performance: Evidence From Internet News
Xiaoman Jin, Jun Wang, Jinghua Tanand Qing Li (2022). *Journal of Global Information Management (pp. 1-25).*
www.irma-international.org/article/media-platforms-and-stock-performance/315611

Internet Users' Privacy Concerns and Beliefs About Government Surveillance: An Exploratory Study of Differences Between Italy and the United States
Tamara Dinev, Massimo Bellotto, Paul Hart, Vincenzo Russoand Ilaria Serra (2006). *Journal of Global Information Management (pp. 57-93).*
www.irma-international.org/article/internet-users-privacy-concerns-beliefs/3645