Rural Community and Human Development through Sustainable Information Technology Education: Empirical Evidence from Osun State in Nigeria

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ABSTRACT

In developing countries, Information Technology education is associated with high cost and is not typically available outside urban areas. Seeking IT education might not be on the priority list of countries battling numerous problems related to healthcare, housing, nutrition and other basic needs of life, but globally, IT education is an increasingly important aspect of human resource development, as well as economic development. This article presents a case where the provision of IT education differs from the conventional emphasis on urban dwellers. The authors discuss the case of Summit Computers in a rural community in Nigeria. The analysis of the case suggests that for developing countries to benefit from advances in IT, awareness among the real users, convenience, affordability and consideration of how IT training can meet local needs and employment are important factors. Entrepreneurship, participation and empowerment of local users are also discussed as important factors that enhance the sustainability of IT education in rural communities.

Keywords: Developing Countries, Economic Development, Human Development, Information Technology Education, Nigeria, Rural Community

INTRODUCTION

As the global economy is gradually transforming to a knowledge economy and with the reality of globalization, the role of information and communication technology continues to gain more significance (UNDP, 2008). The era when the effect of these phenomena is limited to western industrialized countries or the urban capitals of developing countries is passing (Mbarika, Jensen,}

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There have been arguments that IT can provide solutions to problems of rural areas (Richards, 2004) in terms of socio-economic development (Agerou, 1998; Kuriyan, Ray, & Toyama, 2008; Madon, 2000) and empowerment (Dawson & Newman 2002; Strover, Chapman, & Waters 2004). According to Hollifield and Donnermeyer (2003), access to these information technologies will be necessary for rural communities to attract and retain businesses and thus remain economically viable in the 21st century. The use of information and communication technology (ICT) has spread to every corner of the globe, albeit not in the same proportion (WDI, 2008). From downtown Manhattan to rural parts of Karnataka, people are utilizing these technologies for various purposes from monitoring stock prices to monitoring weather for agricultural purposes to getting services from government. Likewise many organizations are promoting and supporting the creation of local entities that would make ICT accessible on an affordable basis to everyone (Roman & Colle, 2003). While many people in western industrialized countries can afford to acquire a computer system at home or live in a community that provides access at the local library, cyber cafes and similar centers are fast-growing alternatives in developing countries. Local businesses and organization know the importance of IT to their businesses though it may not be readily available.

Despite the importance and real need that ordinary people have found for IT, many still lack adequate education to take advantage of the benefits. The digital divide is not only between western industrialized countries and developing countries, but is an issue that can be present within a country, between rural and urban dwellers, or even within areas in urban centers (Mulama, 2009; Comfort et. al., 2003; Kvasny & Keil, 2002; Kvasny & Truex, 2001). Significant proportions of people in developing countries live in rural areas (e.g. 84% of Nigerians) and in poor areas of urban cities. Usually, rural areas are also characterized by low population density, which translates to low demand level for IT education relative to concentrated urban areas (Hollifield & Donnermeyer, 2003). These are areas where business-minded, profit-driven entrepreneurs are not likely to site an IT education center. In many countries, IT education is largely private sector driven as IT education is not part of the curriculum at primary and post-secondary public institutions, or even at many post-secondary government institutions. Further, IT instructors with adequate skills are mobile and more likely to live in urban areas. For all these reasons, IT education is not readily available in many areas in developing countries.

The outcomes generated by community informatics (the science of information as applied to community development issues) - strong democracy, social capital, individual empowerment, sense of community and economic development (O’Neill, 2002; Todaro, 2006) are directly relevant to the expected outcomes of IT education, yet the focus of community informatics (Grabill, 2003; O’Neil, 2002; Warschauer, 2003) has not been on provision of adequate IT education to rural dwellers but more on IT content and access to IT infrastructure. The issue of IT education at the rural level has been largely overlooked in Information System research.

The purpose of this study was to investigate the concept of IT education centers in rural areas. The study specifically sought to address the following questions:

- Why is IT education not readily available in rural areas in developing countries compared to the urban centers?
- How is IT education contributing to human and rural community development?
- What are the factors that contribute to the sustainability of IT education in rural areas?

In this article, we examine the concept of IT education, with special reference to developing countries. We characterize rural areas in developing countries and summarize how human and rural development issues relate to IT. In the analysis of the case, we discuss how the efforts of the case organization contribute to human and rural development. We consider the
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