

Can ICT Support the Development of Ecological Tourism in Aboriginal Tribes? A Case Study in Taiwan

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ABSTRACT

Information communication technology (ICT) has become a tool for achieving development goals for developing countries and disadvantaged groups. An ICT tourism project was launched for Taiwanese aborigines, suffering from low social and economic status, to support local ecological tourism and stimulate economic activities in the area. This study attempts to ascertain the impact of the project on the aboriginal tribes. On the basis of our interpretive case study and intensive interview approach, the findings highlight a number of negative impacts occurring before the actual benefits of the project could be felt. As a result of our observations of confusion and conflict within the tribes arising from the ICT projects, we propose that such a project in aboriginal tribes can be somewhat of a two-edged sword; on the one hand, the project creates confusion about aboriginal identity and deepens the conflicts within the community, while on the other hand, it helps reduce the digital divide and stimulates local commercial activities for the communities. Such ambivalence to the ICT project ultimately undermined its potential for success.

Keywords: Tourism, ICT development, the aboriginal people, Taiwan

INTRODUCTION

Information communication technology (ICT) has become a tool to achieve development goals for developing countries and disadvantaged groups (Sunden & Wicander, 2006). For people in developing countries and rural areas of developed countries, ICT also carries a lot of expectations with respect to its transformative effects in all areas of the economy and society (WorldBank, 2008). For Taiwanese aborigines, who have suffered from low social and economic status, both private and public sectors have endeavored to promote ICT to improve their social and economic conditions. One such attempt was an ICT project designed to stimulate ecological tourism in aboriginal tribes in Taiwan.

Taiwanese aborigines currently have both lower ICT penetration and accessibility compared with other groups (T. S. Wang, 1997; Y. P. Wang, 1994; Yohani, 2002). In the last several hundred years, aboriginals in Taiwan have been subjected to reins of various governments and have suffered not only in terms of their socio-economic position, but also with respect to their cultural identity. Many aborigines now have lost their own languages and traditions (Yohani, 2002). Moreover, aboriginal people now face challenges resulting from the digital divide because of the smaller opportunity they have to access and adopt ICT. The purpose of this study is to reveal the impact on the aboriginal people of ICT tourism projects. In this study, we start by evaluating the ICT adoption situation in Taiwanese aboriginal tribes. This is followed by our interpretive case study with intensive interviews, focusing on the impact of the promotion of ICT, and our attempt to verify the attitude toward and expectations of information technology in these aboriginal tribes. Our findings are of value to those responsible for the formulation of effective policies that promote the development of ecological tourism and ICT implementation for the aboriginal tribes.

The following section of this paper discusses some of the issues associated with ICT in the context of minorities, and ICT development projects for underserved groups. Section 3 describes the interpretive case study research method used in the study. In the fourth section, the empirical evidence and analysis from the case study of the Taiwanese aboriginal tribes is discussed. The final section discusses and draws conclusions about the study findings.

LITERATURE REVIEW

In this section, we examine the issues associated with information communication technology (ICT) and minorities, ICT development projects for underserved groups, and ecological tourism.

Information Communication Technology and the Aborigines in Taiwan

Many of us presume that universal access to information and communication technology (ICT) will bring higher living standards and improve social welfare globally (Dewan & Riggins, 2005). However, the truth is that ICT is used in the diversity and distinctiveness of particular contexts, and that people adapt ICT for their own purposes (G. Walsham, 2002). In other words, the outcomes of ICT projects can vary from project to project. Before we can examine more deeply the ICT development project under study, it is important to gain a thorough understanding of the context in which the ICT project was conducted.

Wishing to conduct an in-depth examination of ICT adoption, the researchers focused on minority groups. Previous studies on Native Americans revealed that there may be additional historical and cultural factors that play an essential role in the IT adopting process. For example, Native Americans are able to maintain their tribal traditions and languages and at the same time, accept new technologies which address their needs (Varma, 2005). Although little research has been undertaken into ICT adoption in Taiwanese aboriginal tribes, the aborigines in Taiwan have similar conditions to those of the Native Americans; both lost their land and live mainly in secluded areas. Their mother languages are quickly being eroded and they are increasingly forced to adopt mainstream culture (Taiabn, 1993). In addition, both social groups have the lowest rate of ICT penetration and accessibility in the broader society.

The National Telecommunications Information Administration (2004) once pointed out that, regardless of ICT availability or affordability, a certain percentage of people would likely remain non-users due to the inequality of ICT accessibility and use. From data presented in the Taiwan National Report of Digital Divide (Taiwan Research Development and Evaluation Commission (RDEC), 2006, 2004), researchers discovered that while some Taiwanese people still remained both disinterested about, and unconnected to, the Internet, both ICT penetration and accessibility had grown sharply. The report also showed that the aborigines remained the group with lowest ICT penetration and accessibility. Even though the Taiwanese government had spent millions of dollars improving the digital divide of the aborigines, less than 40% of Taiwanese aboriginal people had internet access, and only 45.2% of aboriginal families had home computers (Taiwan Research Development and Evaluation Commission (RDEC), 2006, 2004).

According to the findings of previous studies, when examining issues related to ICT, researchers should focus not only on “who uses ICT?” but also on “how they use ICT and what they can do” (Hargittai, 2002; Servon, 2002; Tseng & Lee, 2005). Compared with other ethnic groups in Taiwan, the aboriginal group attained the highest rates in terms of both obtaining web-design skills and attending IT-related training, while having the lowest rates for computer ownership and Internet access. Moreover, their intention to continue advanced IT-related training courses at their own expense was also lower than other groups. (Taiwan Research Development and Evaluation Commission (RDEC), 2004).

ICT Development Projects for Underserved Groups

ICT has also been considered a tool that can be used to achieve development goals for developing countries and disadvantaged groups (Sunden & Wicander, 2006). Moreover, the values of ICT for disadvantaged groups and developing countries have been highlighted in major statements and reports from governments and international NGOs (Force, 2001). People, organizations and government have adopted simplistic notions that modern ICT affords great potential to help underserved groups overcome their suppression arising from geographical remoteness. At present, developing countries are making an effort to realize the great potential and opportunities that exist in utilizing their resources to support social and economic growth (Pade, Mallinson, & Sewry, 2006). According to the World Bank (2008), the adoption of ICT in developing countries and rural areas in developed countries has also been surprisingly broad, with many low-income families and those living in rural areas accessing basic ICT services. Moreover, ICT development projects have boosted economic productivity, raising the incomes of families and small businesses, and providing an important source of government revenue.

In spite of high expectations about ICT development projects, to date, there has not been a robust inventory of documented development outcomes (Curtain, 2004). Most evaluations of the ICT development projects in developing countries present a greater proportion of pilots and proposals that emphasize potential benefits rather than actual negative outcomes. Scholars argue that the lack of evaluation results could be the consequence of the difficulties

measuring outcomes related to ICT usage, overemphasis on the potentialities of ICT in development, focus on implementation at the expense of assessment of outcomes, insufficient time for the results of impact evaluations to be released, and the lack of availability of significant amounts of funding for ICT in development projects (Curtain, 2004; Heeks, 2002).

Ecological Tourism

Ecological tourism has become one of the fastest growing sectors of the tourism industry, with annual growth of 10-15% worldwide (Gossling & Peeters, 2007; Mograbi & Rogerson, 2007; Zheng, 2007). According to Honey (1999, p. 4), ecological tourism is “the practice of low-impact, educational, ecologically and culturally sensitive travel that benefits local communities and host countries”. It is also defined as a form of tourism that appeals to ecologically and socially conscious individuals. Ecological tourism typically involves travel to destinations where both the natural environment and cultural heritage are the primary attractions. Ecotourism includes programs that minimize the negative aspects of conventional tourism on the environment and enhance the cultural integrity of local people (Society, 1990).

The Taiwanese government has been working on ecological tourism for a number of years. Of the seven national parks in Taiwan, those that are located in the mountain areas are where many aboriginal tribes have settled. Accompanying the advanced development of ICT and E-commerce, the Taiwanese government announced its policy to promote local tourism through the use of ICT (*Taiwan Ecotourism Whitebook*, 2005). Both public and private sectors have invested in and are working to combine ICT and tourism and to promote ecological tourism with ICT as one of the projects.

RESEARCH METHODOLOGY

The interpretive case study method was adopted as the research methodology of this study, allowing the researchers to examine the richness of the social and cultural changes that occurred when the new information system was introduced (Myers, 1997; G Walsham, 1995). At the same time, the researchers adhered to the principle of contextualization, which aims to reflect the social and historical background of the research setting and is particularly appropriate for this research project (Klein & Myers, 1999, p. 72). The case study research was conducted over a six-month period in 2005. Data were obtained from interviews and documentary sources. A total of 24 semi-structured interviews were carried out with key players in the project coming both from the private sponsor and the aboriginal tribes. All interviews lasted from 45 minutes to one hour and were tape-recorded. The informal interviews with tribe residents lasted from 15 to 30 minutes. Since much of the data is of a sensitive nature, the real names of project participants have not been used.

The documents obtained included proposals, reports, and newspaper clippings. Additionally, the community technology centers, where most of ICT related activities are conducted, were visited. The tourism web pages of the aboriginal tribes were additional research data sources. The data analysis process began with the assembling of the raw materials and the gaining of an overview of the entire process. The raw data assembly process starts on one extreme and interpretative comment to try bringing order to the data, organizing what is there into patterns, categories, and basic descriptive units. The consideration of words, tone, context, non-verbal language, internal consistency, frequency, extensiveness, intensity was our focus in this process.

Research Background

In early 2005, M Technology firm, Official Indigenous Association of Taiwan and F Foundation in Taiwan initiated an E-Tribe program. The purpose of the project was to introduce ICT to aboriginal people and to help them improve their income through the development of local ecological tourism. The main sponsor of the project was M technology. As this firm was not well-acquainted with the aboriginal groups, it invited the F Foundation and the Official Indigenous Association in Taiwan to join the project with the purpose of establishing connections with the tribes. More than ten Taiwanese aboriginal tribes joined the program.

Noticing that most residents in the tribes not only did not have ICT, but also had a poor knowledge of the technology, the projects started with the donation of ICT hardware and ICT training. At the same time, F Foundation sent people to work with the aboriginals and to collect photographs and information to develop the tourism websites. In late 2005, an ecological tourism website for ten aboriginal tribes was established, enabling people to access detailed tourist information about the ten different tribes including their culture, ceremonies, fairy stories, hot spots and places to stay.

The study took place in one aboriginal tribe situated in central Taiwan. Located in the famous Ali mountain national park, T tribe is known for its beautiful scenery and its annual September ceremony. The tribe consists of fewer than three hundred residents, most of whom make a livelihood from farming tea. Due to the famous annual ceremony and friendly character of the tribe, tourists visited the village during the ceremony period, staying in the few small hostels available or sharing rooms in residents' houses. Residents were keen to develop tourism to boost their incomes; they understood that increasing numbers of tourists would mean higher incomes and this was a considerable incentive for T tribe.

FINDINGS AND DISCUSSION

After conducting in-depth interviews with the key tribe members, we exposed the different opinions prevalent within the tribes and organized our findings into three main themes: digital commerce or commercialization of ethnicity; ICT as a two-edged sword for tribal identity; bridging of the digital divide or deepening of the community divide?

Digital Commerce or Commercialization of Ethnicity

Promoting ethnic tourism through information technology accelerates the commercialization of ethnicity. Developing tourism represented another income source for the aborigines, which explained their support for it. Although one tribe member succeeded on only one occasion in selling their goods on the Internet, this experience led the entire tribe to believe that promoting tourism through the Internet would be effective. This was despite the fact that only half of our interviewees had computers and very few of them had broadband connection.

The Internet is wonderful. A few months ago, we sold thousands of boxes of plums through the Internet, and now, we are trying to sell our tea through the Internet, too. (Mr. D, Oct 2005)

After careful consideration, we realized that ICT was very important, especially for promoting and marketing our tourism. Moreover, it is a good opportunity for our villagers to learn. (Ms. S, Oct, 2005)

Although most families owned computers after the ICT tourism project was introduced, residents did not have broadband Internet access. Without stable Internet access, the aborigines found the taking of tourist reservations difficult. Furthermore, having not integrated tribal culture, tourism knowledge and technique, the promoting of ecotourism became a tremendous challenge to the aborigines.

Now our village is changing. Look at those tourists. They sing karaoke and make noise after 11 at night. Teenagers drink and use drugs. How could this happen in our village? I say we are suffering from the bad effects of tourism. (Ms. M, Nov. 2005)

In fact, the hundreds of visiting weekend tourists changed the life of the tribe. The urban tourists expected to experience aboriginal culture in a way that was familiar to them. To meet the expectation of these urban tourists, the aborigines started to upgrade their accommodation and provide entertainment, such as ceremonial dances. In sum, the aborigines traded their tribal life for tourist income.

ICT as a Two-edged Sword for Tribal Identity

In attempting to modernize the tribal identity through ICT, the aboriginals also discovered that ICT was a two-edged sword. Some parents hoped that computers would improve their children's education; however, they had difficulty interacting with their children after giving them the equipment. One interviewee hoped that through Internet access, his peers would be able to develop a deeper understanding of themselves and to keep up with mainstream society. However, the youth encountered the cultural impact of mainstream society at the expense of their connection

with their own tribes. Mr. Bu, the opinion leader, pointed out that increasingly, children did not recognize their culture and considered that “*the seniors in tribes are backward and out-of-date*”.

Bridging the Digital Divide or Deepening the Community Divide?

The project designed to bridge the digital gap resulted in dividing the community in which power struggles already existed. Specifically, the struggles were present among three parties: church, local authority, and opinion leaders. As most of the aborigines were Christian and participated in numerous church activities, their church became the place for them to share information. The local authority retained the right to distribute government resources, while the opinion leaders had considerable power over public opinion. Power parties in aboriginal tribes kept rigidly to their own standpoints, refusing to cooperate willingly with others. The introduction of ICT represented the opportunity for acquisition of considerable resources, for which these power parties wrestled with one another. As tribe members received no support if they were affiliated to the wrong party, the inter-party wrestling further divided the tribe. One interviewee reported:

It depends on how the opinion leaders communicate with each other, work with each other. I have explained this project to them many times. I hope we can be unified and work together for our tribe. However, opinion leaders may have their different standpoints. Until now, they haven't been able to reach any understanding. I have told my boss that we have to relinquish our power if they still reach no agreement at all. (Mr. T, Nov. 2005)

CONTRIBUTION AND LIMITATION

Promoting ecological tourism and boosting the income of the disadvantaged aboriginal groups was a good-intention of the project. Despite heavy investment in terms of effort and resources, this ICT tourism project produced negative effects before the actual benefits were realized. In T tribe, residents needed to overcome their ICT difficulties through stable Internet access and ICT training; at the same time, it was important for them to reach mutual understanding and to establish a direction for ecological tourism. The findings of this study with respect to the current status of ICT in the tribes were attained from close observation. Understanding of the causes of that status provides insight into how effectively to resolve this complex problem. In addition, knowledge of the power relations and possible cultural impact provides guidance to policy makers on the most effective way to narrow the digital gap and how to enable the Taiwan aborigines to make good use of ICT and fulfill their aspirations.

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