Education Trends in Thai Businesses Utilizing Information Technology

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INTRODUCTION

There is a "deep-rooted inequality situation in the Thai economy and society" (Krongkaewa & Kakwanib, 2003). This inequality permeates all aspects of Thai society, highlighting Thailand's current economic vulnerability as they try to address policies that will support sustainable growth while reducing these inequalities. With growing concern about the digital divide, Thailand is an important and interesting region to study. These concerns have highlighted a widening technology gap causing a "new type of poverty called information poverty" (Marshall, Taylor, & Yu, 2003; UNDP, 1998). There has been very little prior research that has examined the take-up of information technology in this region. Although the digital divide has been the concern of all countries, there are now additional concerns about the information divide, which could increase further the gap between developed and developing countries. Education has been highlighted as an important area of policy focus. However, should developing countries such as Thailand be targeting their education resources towards specific fields that will support research and development into new technologies aimed at reducing the digital and information divide? "Women produce more than half the world's food and spend most of their income on family welfare and food, but a lack of access to services, education and technologies keeps them uninvolved in the decisionmaking processes" (Sarker, 2003). Due to this lack of skills or literacy, women are unlikely to be able to directly use or even to understand the importance on information technology (Sarker, 2003). Thailand's policy commitment to advancing science and technology should be in juxtaposition with higher "educational expenditures, technical training, and building institutions necessary to create a knowledge society" (Wilson III, 2000). This would support the notion that "pro-poor public access policies" would help overcome some of the educational and access barriers, as long as they were developed with "effective regulatory mechanisms" (Sarker, 2003). This research incorporates an analysis of educational trends within 31 non-agricultural Thai businesses in Chiang Mai, with a

collective total number of employees of over 3,000, that were subjects of a pilot study conducted in the north of Thailand. This article considers the educational trends of employees in these businesses, which may support electronic enablement and digital divide reduction.

LITERATURE REVIEW

It is widely agreed that "Information Technology is important for developing countries in alleviating information poverty, enhancing competitiveness, improving public sector management, participating in global trade and production, and promoting environmentally friendly development" (Hanna, Guy, & Arnold, 1995; Marshall et al., 2003; Norris, 2001). To achieve these goals governments in developing countries need to implement policies that will encourage education in fields that will support technology development, and strategic research and development projects that the government may have in place. Education is also one of the matrices commonly used when assessing the development of a country. When reporting development indicators for Thailand, the National Statistics office of Thailand reports on three areas; Educational Budget, Sex Ratio by Education Attendance, and Literacy (Ministry of Information and Communication Technology, 2003). When considering the information and digital divide Mossberger, Tolbert and Stansbury (2003) clarify two significant areas of "basic literacy, prose and document, which are clearly prerequisite skills required for information literacy in the context of using resources on the Web" (Mossberger, Tolbert, & Stansbury, 2003; Penuel & Kim, 2000). Education in basic literacy, therefore, is required to reduce the information divide, and thereby offering further reduction in the digital divide. This is an area being addressed by developed nations in relation to their own information divides, but Thailand faces a further divide, that being a language divide, as English is the second language and therefore poses an additional hurdle to the information divide. Basic literacy in the Thai language is also measured and reported by the National Statistics Office (National Statis-

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tical Office, 2003c). This area needs to also be evaluated, as basic first language literacy will enable Thais to access Thai information and thereby reduce any national information divide, but this aspect of development is not covered in this study as we are more specifically interested in the global inclusion of Thailand and its reduction of the information divide in the global community. Thailand's "policy challenge is how to offer assistance to those who lack basic literacy skills in English to reduce this divide, or at least to assist those who are interested" (Mossberger et al., 2003).

METHODOLOGY

Education

The educational levels of employees in the businesses in the pilot study were recorded to offer some indication of the level of education being achieved and employed in general. There was a 2.44% disparity between the number of employees indicated and the answers to the highest education level achieved by those employees. The questions asked for a response for both males and females, indicating how many employees had the education levels of: (1) No formal Schooling; (2) Primary School; (3) Secondary School; (4) Technical or Further College education; and (5) University or Tertiary Institutions.

The results of this pilot study then considered the national statistical information for the period 1999-2003, to consider national trends toward education. We further discuss whether these national trends, considering basic Thai literacy, could highlight development and educational opportunities or whether they are indicating significant progress that would support the reduction of the digital divide globally for Thailand.

Language

A further supposition was that the inability to interpret from English to Thai could inhibit research and development projects in Thailand and widen the information divide, thereby posing a further hurdle for the electronic development of Thai businesses.

The questions asked in this section were self-selection answers for both male and female staff indicating their level of skill in the following areas of speaking and reading English. The choices for answer were: (1) Very well; (2) Well; (3) Not well; and (4) Not at all.

There were no statistical reports found that tested English language speaking or reading ability. As English is considered the second language in Thailand, reporting speaking and reading ability would be a significant factor measuring English literacy, and in turn offering determinants for the information divide. Questions pertaining to English Language speaking and reading ability should be considered for future statistical recording and reporting purposes by the National Statistics Office of Thailand.

DATA ANALYSIS

Education

The responses to the highest level of education achieved, Table 1, indicated a high level of education in both male and female employees, indicating 95% of their employees had received some form of formal education. This is further supported by the Literacy Rate statistics indicating high literacy rates of 92.6% for those people ages 15 years and over in 2000, with higher rates of 98% literacy found in those people between the ages of 15-24 (National Statistical Office, 2003a). Although there was an indication that the male/female employee ratio was in favour of males by a ratio of 1:2.03, the ratio of males/females with formal education indicated a ratio of 1:1.23 in favour of female employees.

The highest education level achieved indicated an overall higher level of education in the women employed compared to the men employed (Table 1), except for a slight variation in the technical or further college education category.

These findings seem to indicate some disparity between the subjects studied and the national statistics, as shown in Table 2, where there is a national indication that would indicate higher levels of educated males than females. In considering this apparent disparity it should also be highlighted that the businesses in this pilot study were non-agricultural by trade and were businesses within the Chiang Mai municipality, which could indicate some disparity between Table 1 and Table 2. Table 8, Appendix A, provides evidence that approximately 41% of the Thai population are engaged in agriculture and fishery. Additionally 7% of the Thai population were included in the

Table 1. Highest level of education achieved responses



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