

Social Influence in Using ICT among Fishermen in Malaysia

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Received: November 4, 2012 Accepted: November 26, 2012 Online Published: January 28, 2013

doi:10.5539/ass.v9n2p135

URL: <http://dx.doi.org/10.5539/ass.v9n2p135>

The research is financed by Research University Grant Scheme (Scheme 2) sponsored by Universiti Putra, Malaysia.

Abstract

One of the main factors that changes individuals' behavior is social influence. Social influence is defined as a change in an individual's thinking, feelings, attitudes, or behavior that results from interaction with other individuals or groups. Within the scope of ICT adoption among fishermen, social influence is expected to spread, and this study attempts to discover the social influence that impinges on fishermen's use of ICT in their fishing routine. This is a quantitative study in which a total of 400 respondents have been selected based on multi-stage simple random sampling. SPSS is used to gain the required analyses, and descriptive analysis is also performed. The results reveal that social influence has less impact on fishermen's use of ICT based on the low level of mean scores recorded for each of the eight statements studied.

Keywords: fishermen, fishermen's development, social influence, ICT

1. Introduction

The fisheries industry is one of the most important branches of the agriculture sector. The importance of this industry, particularly in terms of nations' food security and the enhancement of communities' socio-economic aspects, is incontrovertible. The Malaysian government has placed special interest in this industry via a number of initiatives, such as providing fishermen with a monthly allowance worth USD66, and subsidizing fuel and diesel, which is 65 cents cheaper to registered fishermen. These actions can be seen as successful, as the numbers of registered fishermen and vessels have significantly increased. To date, there are 129,622 registered fishermen and 49,756 registered vessels in Malaysia (Department of Fisheries Malaysia, 2010).

In line with the demands of development, fishing communities have been offered various types of advanced equipment and technologies to aid their fishing operations. Technologies such as sonar, echo sounders, geographical positioning systems (GPS), radar, and, of course, the more traditional methods such as mobile phones and wireless sets, have been proven to intensify the socio-economic aspects of the fishing industry (Abu Hassan et al., 2011 and Omar et al. 2011). A number of scientific studies have been conducted into fishing technology, along with the social aspect. Several studies have focused on the impacts of demographic factors such as finance, age, fishing location and gender on ICT usage (Olatokun, 2009; Alampay, 2006; Ong and Lai, 2006). In addition, other studies have been implemented to discover the impacts of behavioral factors on ICT usage.

One of the main behavioral factors in changing individuals' behavior is social influence. Social influence is defined as a change in an individual's thinking, feelings, attitudes or behavior, which results from interaction with other individuals or groups. Social influence is different from conformity, power, and authority (Rashotte, 2006). Gruber and Marquis (1969) consider the following human factors to affect the technology transfer process: training and experience, personality characteristics, communication procedures, organizational effects, mission

orientation, and motivation. In addition, family, friends, related agencies such as the Fisheries Development Authority Malaysia (LKIM), and the heads of villages play important roles in influencing the fishing community to use ICT equipment. This is related to one of the missions of LKIM, which is to create a developed, independent and progressive fishing community. In addition, Valente (1995) emphasizes the ability of social effects to influence people's adoption of something. Furthermore, Gilligan (2005) accentuates the importance of social influence on ICT usage by stating that people that live in areas where levels of ICT use are low due to residents' limited access to ICT goods and services will have a low level of ICT usage, while those who live in areas surrounded by complete ICT goods and services will have higher levels of ICT usage.

2. Methodology

This research is quantitative in nature, and a developed instrument (questionnaire) was used to collect the data needed. The study gained its data via questionnaire which was developed based on the past studies and reviews of literatures with regard to social influence in using ICT. Questions with regard to social influence in using ICT are associated with influence of family members, fishermen colleagues, agencies officers and village administration members on fishermen to use ICT. To have these sources within the instrument are important as Omar et al. (2012), Hassan et al. (2011) and Abu Samah et al. (2010) have proven the importance to include these sources in social influence study. The developed instrument was then pre-tested at Port Dickson, Negeri Sembilan, whereby a total of 30 fishermen were involved in the process. The pre-test has resulted the Cronbach Alpha Value of .683 which exceeded the recommended value of .60 suggested by Mohd Majid (1998). The resulted value has reflected the validity and reliability of the instrument used. The instrument then was used in the real data collection process which was conducted in September 2012. Through multi-stage simple random sampling technique, a total of 400 registered fishermen were chosen as the respondents. All of the respondents came from four selected fishing districts in Malaysia, namely Mersing (represented Johor), Larut-Matang (represented Perak), Langkawi Island (represented Kedah) and Kuala Besut (represented Terengganu). To ease the data collection process, trained and experienced enumerators were employed, and the surveys took an average of 20-30 minutes to complete. For each of the question asked to the respondents, they were given a 5 likert scale option whereby 0 represents strongly disagree, 1 represents disagree, 2 represents moderately agree, 3 represents agree and 4 represents strongly agree. To achieve the objectives of the study, descriptive statistics such as frequency, percentage and mean were employed to describe the general data of the study.

3. Results

3.1 Respondents Demographic Data

Involvement of male in the fishing industry particularly as a fisherman in Malaysia is absolutely high (98.8%) which indicates the probability that women still place less interest in the fishing industry. Most of the fishermen found can be considered as senior fishermen as the mean score recorded for their age is 47.0, and most of them are Malays (90.5%). Majority of them received a low level of education achievement whereby a total of 57.3% of them have completed only up to primary school. A few have successfully possessed SPM level of education (10.8%). Nonetheless, analysis done has revealed that there are also fishermen who have never been to school (13.3%) at all. Almost half of them (49.0%) have an average income of RM501-1000 per month.

Most of the fishermen can be considered as experienced fishermen based on mean score recorded for experience which was 31.0 years. More than two fifth of them allocated 16 to 20 days (42.5%) in a month at sea. With regard to categories of fishermen, Slightly more than two third of the respondents (66.8%) are skippers and 15.0% of them have more than five crew members. A total of 75.8% of them belong to the Zone A catchment area. As been informed earlier, there are four zones of catching for the registered fishermen in Malaysia namely Zone A, Zone B, Zone C0 and Zone C2. Within the system, fishing vessels using commercial equipment, e.g. trawler nets and purse seines, are restricted from conducting their activity in Zone A, which is reserved exclusively for artisanal fishing equipment.

3.2 Social Influence in Using ICT among Fishermen

Table 1 displays the results of statements regarding social influence. The mean score for each item was used to describe the strength of each statement. The statement "The majority of fishermen in my region use ICT and encourage me to use ICT" recorded the highest mean score (M=1.83). The second highest mean score was recorded for the statement "My family encourage me to use ICT tools while at sea" (M=1.78), followed by the statement "The majority of villagers here use ICT" (M=1.77). The lowest mean score was recorded for the statement "Agencies provide financial assistance for us to conduct activities that require the use of ICT" (M=0.80).

Table 1. Percentage distribution of social influence items

Statement (vessel)	Strongly Disagree (%)	Disagree (%)	Moderately Disagree (%)	Agree (%)	Strongly Agree (%)	Mean
Relevant agencies promote the use of ICT in activities related to fisheries.	28.5	28.5	15.5	20.8	6.8	1.49
Agencies provide financial assistance for us to conduct activities that require the use of ICT.	43.8	39.8	10.5	4.5	1.5	0.80
The relevant government agencies support the tasks and activities that use ICT as their main medium	34.8	26.0	18.2	17.0	4.0	1.30
The head of the village and JKKK members use and encourage me to use ICT.	36.3	32.2	13.5	15.3	2.7	1.16
The majority of villagers here use ICT.	16.5	24.8	29.6	24.5	4.6	1.77
The majority of fishermen in my region use ICT and encourage me to use ICT.	15.0	25.8	25.3	29.5	4.5	1.83
My family encourage me to use ICT while at sea.	23.5	19.5	24.0	21.8	11.2	1.78
There are courses on the use of ICT (such as GPS, sonar, and echo sounders) in my area.	37.3	27.5	11.7	19.8	3.7	1.25

4. Discussion

Based on the results obtained above, the influence of friends is a major factor in using ICT among the fishing community. This may be based on the fact that they spend most of their time conducting their fishing routine together. The average number of days spent at sea is 25 days a month. At certain times, in order to maximize their catch, they spend two or three days at sea before returning to the jetty. Such durations offer more time for them to share and learn new things with regards to technology. In addition, villagers can drive fishermen to use ICT during social gatherings and breaks after returning from sea. Here, they can share their experiences and views about technologies.

The results also show that 43.8% of respondents strongly disagree with the statement that agencies provide financial assistance for them to conduct activities that require the use of ICT. This is a discouraging scenario, since such assistance is supposed to be provided to fishermen. Additionally, agencies play a role as facilitators (Restrepo-Tarquino, 2005), and thus their function in encouraging and motivating fishermen by providing financial assistance for them to use ICT in their fishing routine is crucial. Encouragement from family was also one of the factors contributing to the use of ICT among fishermen. It was found that the fishermen were using mobile phones to communicate with family members while at ocean. Sometimes, vessels are provided with the Internet or wireless sets already integrated. Thus, communication becomes much easier, albeit they have to stay longer for their fishing operation.

Meanwhile, villagers can also influence the use of ICT among these fishermen. The strong relationships, bonds and attachments within the community can intensify ICT usage among them. In addition, within the fishing culture it is common for fishermen to spend their evenings together conducting social activities such as gathering and playing checkers after returning from sea. At this level, they can mix with their skippers or middlemen. This enables them to share information and discuss problems with regards to their ICT usage. Last but not least, 36.3% strongly disagree that the heads of the villages and his administration staffs (JKKK members) can influence ICT usage among the fishing community. This shows that social influence is different from conformity, power, and authority (Rashotte, 2006). Though community leaders have a big influence within the community,

this differs when it comes to encouraging fishermen to use ICT, wherein the influence of family, fishing colleagues and villagers exceed that of headmen in the village.

5. Conclusion

Though some social influence factors such as family, colleagues and villagers do influence fishermen's use of ICT, the overall impact of social influence on fishermen's ICT usage is considered low, based on the low mean scores recorded for all the statements included in the questionnaires. Surprisingly, the lowest mean score was recorded for statements relating to the relevant fisheries agencies, which reflects the fact that there is little encouragement and motivation to use ICT from these agencies. Although social influence is a big factor for fishermen to use ICT, within the scope of the Malaysian context there is still a lot of work to be done to ensure that this group receives adequate support and encouragement from their social environment to further embolden them to use ICT in their fishing operations.

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