CURRENT SITUATION OF E-LEARNING FOR FISHERMEN IN TAIWAN

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ABSTRACT

The purpose of this paper was to understand e-learning current situation for fishermen in Taiwan. Then, the developing strategies will be suggested. The method of this study was questionnaire and interview with fishermen and fishery experts. There were 270 questionnaires collected by post mail. The return rate is 54%. The main findings were: there were 80.7% subjects unable to use Internet. 50% of them said that they usually listen Taiwan area Fishery Radio Station. There were 33.3% of subjects indicated that they were interesting in fishery e-learning web. The fishery information and techniques were their main interest. No time and too old were the main problems. Finally, four strategies of e-learning development for fishermen were recommended.

Keywords: E-learning, Fishermen, developing strategies

I. INTRODUCTION

The 21-century is the era of highly developing of information, and the computer network and wireless communication application will become the basis of knowledge economics 【1】. The Internet and communication technology not only lessened distance between humanity but also changed learning style 【2】【3】【4】. No matter in fishing, breeding, aquatic products manufacturing, or in transportation and sale, to get and use those fishery information from Internet are became an important things for fishermen learning 【5】【6】. For keeping the development of fishermen in Taiwan that adapting to the new era, it should combine all the applications of information technology 【7】.

The e-learning is base on Internet and use hypermedia as learning materials 【8】. It possess the characters including easily obtaining in anytime and anyplace which especially conforms to the quickly change of the modern society, getting rid of the limit of traditional teaching on the space and time and can create a free personal learning space. The purpose of E-learning is to create a meaningful and diversification learning environment and to promote and support learning of learners. It becomes the most popular technology and media for learning and education 【9】. For these reason the E-learning will be important tendency of future network era. Network technology can extend the influence to everywhere and supply the chance of getting information for fishery on the Internet for any time, place, and any equipment 【5】【6】.

Under development of information technology, how to help fishermen immediately find knowledge and affirm new concept, and to cerate e-learning network is an important issues in knowledge economic era 【7】. Before to cerate e-learning network, it needs to understand e-learning current situation and accept desire for fishermen. The purpose of this paper was to understand e-learning current situation for fishermen in Taiwan. Then, the developing strategies will be suggested.

II. MATERIAL AND METHOD

The instrument of this study was the questionnaire. "The inventory of e-learning current situation for fishermen in Taiwan" developed by the researcher. The questionnaire was developed using the following steps:

1. To review related literature.
2. To interview experts in fishery field.
3. To construct the questionnaire.

After literature review and interview, the researcher constructs the questionnaire. There are 25 random fishermen's association are selected as sample's group. Each association is collected 5 directors and 15 members by general secretary. There are 469 subjects returned the questionnaire. After follow up confirmed, 270 effective samples are finally adopted. The effective returned rate is 54%. Data were analyzed by percentage.

The questionnaire was divided two parts: background data and e-learning current situation opinions:

1. Background data

This section was to collect basic data about samples, including identity, gender, age, education, working experience, working property and area.

2. E-learning current situation for fishermen.

The questions include whether computer has at home or not. Whether use Internet or not. How long to use Internet per week? How to receive information? What learning desire from fishery web site. What content on e-learning. What problems from e-learning?

III. RESULTS

There are 35.6% director of fishermen's association, 57.4% member of fishermen's association and 7.0% general secretary of fishermen's association for these subjects. 93.3% subjects are male and 6.7% subjects are female. There are 22.9% samples live in north, 6.3% live in midland, 55.5% live in south and 15.5% live in east. 5.5% samples are engaged in pelagic fishing, 71.3% subjects step into coastal fishing and 23.1% samples deal with breeding fishing. The description of samples was shown in Table 1.

Table 1 the description of samples

Category	Classification	Frequency	Percentage
Identity	Director of fishermen's association	96	35.6%
	Member of fishermen's association	155	57.4%
	General secretary of fishermen's association	19	7.0%
Gender	Male	252	93.3%
	Female	18	6.7%
Age	Under 35yr	23	8.5%
	36yr-45yr	49	18.1%
	46yr-55yr	80	29.6%
	Upper 56yr	118	43.7%
Education	Under elementary	142	52.6%
	Junior high school	51	18.9%
	Senior high school	59	21.9%
	Upper junior college	18	6.7%
Working experience	Under 5yr	19	7.0%
	5yr-10yr	23	8.5%
	10yr-15yr	19	7.0%
	15yr-20yr	25	9.3%
	Upper 20yr	184	68.1%
Working property	Pelagic fishing	14	5.5%
	Coastal fishing	182	71.3%
	Breeding fishing	59	23.1%
Area	North	62	22.9%
	Midland	17	6.3%
	South	150	55.5%
	East	42	15.5

There were only 9.6% fishermen always to use "word" to process their document. There were 78.9% subjects said that they are unable to use. The situation was same in use another computer relative tool or behavior such like e-mail, web site, MSN, E-shopping etc. more than 80% samples said they unable to use such function. It shows in Table 2.

Table 2 to use computer function

	Always to use		Not often to use		Unable to use	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Word	26	9.6%	31	11.5%	213	78.9%
E-mail	21	7.8%	32	11.9%	217	80.4%
WWW	23	8.5%	29	10.7%	218	80.7%
MSN	5	1.9%	28	10.4%	237	87.8%
E-shopping	4	1.5%	34	12.6%	232	85.9%

There was 67.4% subjects own computer at home. There were only 12.6% to take computer training before, it means more than 87.4% samples were not accept computer course in past period. This was the major problem in promoting E-learning program for fishermen in Taiwan. When asked whether willing to participate computer training or not, it was only 31.5% subjects said "yes". The data is shown as Table 3.

Table 3 own computers and willing to participate computer training

	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Own computer at home or not	182	67.4%	88	32.6%
To take computer training before	34	12.6%	236	87.4%
Willing to participate computer training	85	31.5	185	68.5

There were 33.3% subjects indicated that they were interesting in fishery e-learning web site,66.7% said they don't have interesting. The 78.9% general secretary of fishermen's association pointed out that they were interesting learn through fishery e-learning web site. The members of fishermen's association were lower than general secretary and directors. It was only 29.7% said that they were interesting by fishery e-learning web site to learn. It was showed in Table 4.

Table 4 whether interesting in fishery e-learning web site or not.

		Yes	No	Total
Director of fishermen's association	Frequency	29	67	96
	Percentage	30.2%	69.8%	100.0%
Member of fishermen's association	Frequency	46	109	155
	Percentage	29.7%	70.3%	100.0%
General secretary of fishermen's association	Frequency	15	4	19
	Percentage	78.9%	21.1%	100.0%
Total	Frequency	90	180	270
	Percentage	33.3%	66.7%	100.0%

When answer if there has fishery e-learning web site, what contents are their interesting? There were 57.4% no answer this question and 26.7% samples said that they were very interesting in fishing information and fishing technology, 18.9% very interesting in common sense for livelihood and 17.8% in financial knowledge. Only 6.7% subjects pointed out that they were very interesting in foreign language learning. There were 19.6% samples indicated that they were no interesting in foreign language, the next article was financial knowledge (7.4%) and fishing technology and fishing information was under 3.7% subjects no interesting from fishery e-learning web site content. So, fishing information and technology was fishermen most favorite thing in fishery e-learning web site and foreign language learning was the last. The data was shown in Table 5

Table 5 what contents is their interesting on fishery e-learning web site?

		No answer	Very interesting	Few interesting	No interesting	Total
Fishing information	Frequency	155	72	33	10	270
	Percentage	57.4%	26.7%	12.2%	3.7%	100.0%
Common sense for livelihood	Frequency	156	51	52	11	270
	Percentage	57.8%	18.9%	19.3%	4.1%	100.0%
Foreign language	Frequency	156	18	43	53	270
	Percentage	57.8%	6.7%	15.9%	19.6%	100.0%
Fishing technology	Frequency	156	72	33	9	270
	Percentage	57.8%	26.7%	12.2%	3.3%	100.0%
Financial knowledge	Frequency	156	48	46	20	270
	Percentage	57.8%	17.8%	17.0%	7.4%	100.0%

In Table 6, there were 50% subjects said they were always listening fishery radio station, 28.9% said that they were sometimes listening fishery radio station. There were 21.1% fishermen pointed out that they don't listen fishery radio station. In fishery radio program, fishery atmosphere program was always listening for fishermen. There were 59.6% subjects selected this answer. Fishery news was number two (48.4%). The next was fishery information program (36.7%). Fishery education program was the last one. 29.3% samples indicated that they were never listening fishery education program. It showed that while they fishing, fishery atmosphere and fishery news were both important program for them to receive message from fishery radio station.

Table 6 what program were their always listening in fishery radio station

		Always listening	Rank	Sometimes listening	Never listening
Totally	Frequency	135	-	78	57
	Percentage	50.0%		28.9%	21.1%
Fishery atmosphere	Frequency	161	1	58	51
	Percentage	59.6%		21.5%	18.9%
Fishery news	Frequency	130	2	84	56
	Percentage	48.1%		31.1%	20.7%
Fishery information	Frequency	99	3	112	59
	Percentage	36.7%		41.5%	21.9%
Fishery education	Frequency	59	4	132	79
	Percentage	21.9%		48.9%	29.3%

In Table 7, there were 76.7% fishermen said that they were unable to access Internet. Only 23.3% subjects said yes they could. General secretary of fishermen's association were more than 57.9% could access Internet, but only 19.8% of director of fishermen's association and 21.3% of member of fishermen's association said they could access Internet. It revealed that the access Internet skill was very poor for Taiwan's fishermen.

Table 7 did they be able to access Internet?

		Yes	No
Director of fishermen's association	Frequency	19	77
	Percentage	19.8%	80.2%
Member of fishermen's association	Frequency	33	122
	Percentage	21.3%	78.7%
General secretary of fishermen's association	Frequency	11	8
	Percentage	57.9%	42.1%
Total	Frequency	63	207
	Percentage	23.3%	76.7%

When asked what tools to accesses Internet or information are their interesting in e-learning. 14.8% samples said that they were very interesting from using TV remote to access Internet. The second one is to use cell phone. The percentage was 8.5%. The last one was through radio. The proportion was 7.0%. There were 68.9% fishermen indicated that they were not interesting to use cell phone and 56.3% samples said that they didn't like to use TV remote to access Internet. It was shown in Table 8.

Table 8 what tools to accesses internet or information are their interesting?

		Very interesting	Few interesting	No interesting
To use cell phone	Frequency	23	61	186
	Percentage	8.5%	22.6%	68.9%
To use TV remote	Frequency	40	78	152
	Percentage	14.8%	28.9%	56.3%
Through Radio	Frequency	19	100	151
	Percentage	7.0%	37.0%	55.9%

When asked what influence factors will attract them to access Internet. There were five factors answered for samples. Easy access tools were the first factor for fishermen to access Internet. This means that how to develop easy access tools was the very important matter for e-learning of fishermen. The second influence factor was no constrained for learning time. The third was the contents of web site of e-learning that was useful for fishing. The next was the web of e-learning's content that was very attract. The last one was encouraging by their children. The data was shown in Table 9.

Table 9 what influence factors will attract them to access Internet?

	Frequency	Percentage	Rank
Easy access Internet tools	199	42.1	1
No learning time constrain	151	31.9	2
Attract with web content	117	24.7	4
To be useful for fishing	135	28.5	3
Encouraging by children	58	12.3	5

When asked why they don't interesting on fishery e-learning web site. There were six reasons answered for subjects. No time was the first reason for fishermen expressed that they were no interesting on fishery e-learning web site. The second reason was too old for them. The third one was no willing to accesses fishery e-learning web site. The fourth one was no computer to use at home, so they could not access Internet. The next was the fishery e-learning web site too complex for them to access. The last one was no learning needs from fishery web contents. The data was shown in Table 10.

Table 10 why don't interesting on fishery e-learning web site?

	Frequency	Percentage	Rank
Too old	186	39.3	2
No time	191	40.4	1
No computer	88	18.6	4
No willing	127	26.8	3
No needs from web contents	24	5.1	6
Too complex	47	9.9	5

IV. CONCLUSIONS

The main findings of this study are the following:

1. There were 78.9% subjects said that they are unable to use "word". The situation was same in use another computer relative tool or behavior such like e-mail, web site, MSN, E-shopping etc. more than 80% samples said they unable to use such function.

2. There were only 12.6% to take computer training before. This was the major problem in promoting E-learning program for fishermen in Taiwan.

3. There were 33.3% subjects indicated that they were interesting in fishery e-learning web site.

4. Fishing information and technology was fishermen most favorite thing in fishery e-learning web site and foreign language learning was the last.

5. There were 50% subjects said they were always listening fishery radio station. There were 21.1% fishermen pointed out that they don't listen fishery radio station. In fishery radio program, fishery atmosphere program was the best always listening for fishermen. Fishery news was number two (48.4%). The next was fishery information program (36.7%). Fishery education program was the last one.

6. While fishermen fishing, fishery atmosphere and fishery news were both important program for them to receive message from fishery radio station.

7. There were 76.7% fishermen said that they were unable to access Internet. It revealed that the access Internet skill was very poor for Taiwan's fishermen.

8. 14.8% samples said that they were very interesting from using TV remote. The second one is to use cell phone. The last one was through radio.

9. Easy access Internet tools were the most important influence factor for fishermen to access Internet. The second influence factor was no learning time constrain. The third was the contents to be useful for fishing. The next was the web content that was attract. The last was encouraging by their children.

10. No time was the first reason for them no interesting on fishery e-learning web site. The second one was too old. The third one was no willing. The fourth one was no computer. The next was too complex. The last one was no needs from web contents.

V. RECOMMENDATIONS

The following recommendations were made due to the above results and conclusions:

1. To continuing conduct fishermen computer training program in order to promote their pleasure to use computer.

2. To encourage fishermen using easy tools to access Internet, such like cell phone, TV remote, PDA etc.

3. To strengthen fishery education function from fishery radio station.

4. To urge academic organization to set up fishery e-learning web site.

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