

การพัฒนาทักษะการรู้ดิจิทัลเพื่อลดความเหลื่อมล้ำการเข้าถึงสารสนเทศ ของประชาชนในชนบท*

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาสภาพปัจจุบันการรู้ดิจิทัล และการเข้าถึงเทคโนโลยีสารสนเทศของประชาชนในชนบท พัฒนาหลักสูตรฝึกอบรมทักษะการรู้ดิจิทัลและการเข้าถึงสารสนเทศของประชาชนในชนบท และศึกษาผลการใช้หลักสูตรฝึกอบรมทักษะการรู้ดิจิทัลและการเข้าถึงสารสนเทศของประชาชนในชนบท กลุ่มตัวอย่างที่ใช้ในการวิจัย คือประชาชนในตำบลหัวหวาย อำเภอตากถ้ำ จังหวัดนครสวรรค์ 14 หมู่บ้าน จำนวน 60 คน โดยใช้วิธีเลือกแบบเจาะจง ศึกษาเฉพาะกับผู้ที่มิมีโทรศัพท์มือถือ เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถามสภาพปัจจุบันการรู้ดิจิทัล และการเข้าถึงเทคโนโลยีสารสนเทศของประชาชนในชนบท แบบประเมินหลักสูตรการฝึกอบรมโดยผู้เชี่ยวชาญ แบบทดสอบก่อนและหลังการฝึกอบรมการรู้ดิจิทัลและการเข้าถึงสารสนเทศของประชาชนในชนบท การเก็บรวบรวมข้อมูล สถิติที่ใช้ในการวิจัย ได้แก่ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และการทดสอบค่าที

ผลการวิจัยพบว่า

1. การรู้ดิจิทัลและการเข้าถึงเทคโนโลยีสารสนเทศของประชาชนในชนบท สูงที่สุดคือด้านโปรแกรมการใช้ภาพรวมอยู่ในระดับปานกลาง ($\bar{X} = 3.27$) ด้านวัตถุประสงค์ในการใช้ ภาพรวมอยู่ในระดับปานกลาง ($\bar{X} = 2.84$) ด้านพัฒนาคุณภาพชีวิต ภาพรวมอยู่ในระดับปานกลาง ($\bar{X} = 2.83$) ด้านประโยชน์ในการใช้สื่อสังคมออนไลน์ภาพรวมอยู่ในระดับปานกลาง ($\bar{X} = 2.66$)

2. ขั้นตอนการพัฒนาหลักสูตรฝึกอบรม 4 ขั้นตอน คือ 1) การศึกษาข้อมูลพื้นฐาน 2) การสร้างหลักสูตร 3) การทดลองใช้หลักสูตร 4) การประเมินผลและปรับปรุงหลักสูตร หลักสูตรฝึกอบรมทักษะดิจิทัล มีจำนวน 6 กลุ่มเนื้อหาประกอบด้วย สิทธิและความรับผิดชอบ การเข้าถึงสื่อดิจิทัล ความเข้าใจสื่อดิจิทัล แนวปฏิบัติในสังคมดิจิทัล สุขภาพดิจิทัล และกฎหมายดิจิทัล

3. ผลการใช้หลักสูตรฝึกอบรมทักษะการรู้ดิจิทัลและการเข้าถึงสารสนเทศของประชาชนในชนบท พบว่า หลังฝึกอบรมประชาชนในชนบทมีทักษะการรู้ดิจิทัลสูงกว่าก่อนฝึกอบรมอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

คำสำคัญ: ทักษะการรู้ดิจิทัล, ความเหลื่อมล้ำการเข้าถึงสารสนเทศ

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The Development of Digital Literacy to Reduce the Disparity of Information Access Among Rural People in Nakhon Sawan Province*

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Abstract

The purposes of this research were: 1) to study the current state of digital literacy and access to information technology of rural people 2) to develop training courses on digital literacy skills and information accessibility of rural people and 3) to study the results of using the training course on digital literacy skills and information accessibility of rural people. The samples used in the research were 60 people in 14 villages in Hua Wai Sub-district in Takhlī District in Nakhon Sawan Province by using a purposive sampling that study only for people with smartphone. The instrument in this research were a questionnaire of the digital literacy current state and access to information technology of rural people, the professional training course assessment and the pretest and posttest on digital literacy and information accessibility of rural people. The statistics used in data analysis were mean, standard deviation, paired- samples and t-test.

The findings of this research as following:

1. The digital literacy and access to information technology among rural people was at the highest level on the program. The overall was at a moderate level ($\bar{X} = 3.27$), the objective of using the overall was at a moderate level ($\bar{X} = 2.84$), the improvement of quality of life the overall was at a moderate level ($\bar{X} = 2.83$), the benefit of using social media was at a moderate level ($\bar{X} = 2.66$).

2. The training course development process consisted of 4 steps: 1) study of basic information 2) curriculum creation 3) curriculum Trial 4) curriculum assessment and improvement. The digital skills training course consisted of 6 content groups; right and responsibility, access to digital media, understanding digital media, digital society practice, health in the digital age and digital law.

3. The results of using the training course on digital literacy skills and information accessibility of rural people found that after training which people in rural areas were higher digital literacy skills than before training with statistics significance at .05 level.

Keywords: Digital literacy, Disparity information access

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Introduction

“Digital Economy and Society” is a policy that aims to increase Thailand's economic potential by laying the foundation for the entire digital economy to be vigorously driven. building public readiness for awareness and utilization of such policies It is therefore urgently necessary especially people in remote areas people in agriculture and low-income people.

It is the majority of the country's population. Therefore, it is essential to have equal access and benefit from such policies among urban residents and middle-income earners. “Community ICT Learning Center” is a tool used by the government to reduce the digital divide between urban and rural areas. Create access to technology to be a learning center and develop skills in using information technology and communications for people. There are currently more than 2,000 establishments across the country. The rapid change in technology has made the technology access rate much higher. Device prices are getting cheaper. People own more digital communication devices such as smartphones and tablets. As a result, the number of users of the community ICT learning center decreased significantly. Modification of the role of the tele center is responsive to usage and is an important tool for driving digital policies for the economy and society in the public sector. Therefore, it is an urgent mission to prepare the public sector to cope with rapid changes and increase the country's competitiveness with the strength of the country's foundation.

Digital literacy It is an important skill in today's era where technology has come to influence and play a part in daily life (Gallardo-Echenique, 2015; Karpati, 2011). Or using a smart phone to connect to the Internet conveniently according to the government's policy to support telecommunication infrastructure and information technology. But that doesn't mean the country's citizens will become well-versed in digital literacy. Becoming a digital literacy skilled person should focus on developing fundamental knowledge skills rather than technology-based learning (Gilster, 1997; Ng, 2015). Therefore, education is very important and necessary. as well as developing the ability to think analytically The ability to use digital tools to create content and produce digital information in various formats. Internet privacy and security Ethics and responsible use are also integral to the development of people who become fully digital citizens (Ashley, et al., 2012).

The reducing social inequality and creating opportunities for access to public service is one of the main policies of the current government to explaining that social inequality is another cause of conflict and suffering among the people which is an economic inequality. This is one of the cause of disparities in accessing information and digital knowledge (Digital Divide). The rural people of

the country had a disparity in access to digital information and knowledge (Digital Divide) or a digital exclusion as a result of the spread of modern technology. There are still political exclusions arising from conflicts at the national level through information and communication technology training which is important to urgently enter social and cultural practices to foster full participation in community missions and government institutions. The planners must design a digital collaborative project leading to a variety of media available and expanding the horizons of digital literacy and teach participants to create meaningful information content. (Bach, Shaffer & Wolfson, 2013) and strengthening local organizations (Rivas, 2013). In other that, Ferreira, Moreira, Mendes, Gerla and Cerqueira (2014) propose to provide digital collaborative services for the community to get content more information that have exchanged information to increase the chance of contact, career education and e-Book.

Thailand has developed in the digital field a long way from the past. These are important issues that must be accelerated in order to enter the economy. digital activities and society truly (Saran Inthanon, 2018; Monlamai Vichienwanitchkul, 2018; Matana Wiboonysake, 2018; Office of the National Commission on Digital Economy and Society Ministry of Digital Economy and Society, 2019) On the surface, it might seem that the digital inequality problem in today's society is less. In the press conference, the latest news about "Thailand's digital life inequality index" of Assistant Professor Dr. Terdsak Chomtosuwan, Associate Dean for Academic and Research institute of economics Rangsit University. Found that people living in Bangkok It has the highest use of digital technology, but it's notable. Is a person living in the southern region, which is developing towards the use of digital technology, higher and faster than those who live in the north by people living in the northeast region has developed towards the lowest use of digital technology from the whole country. People who live in Mae Hong Son Province has the lowest average usage of digital technology, and in the past 5 years between 2013 and 2017, the inequality situation Thailand's overall digital advancing rate has improved from 23.39% in 2013 to 32.9% in 2017, but that overall is still not up to par. 50 percent or half of the overall picture of the country It can reflect that digital inequality still exists in Thailand.

Suphadilok and Sataruji (2004) said that the media used in communication in Thailand was a duty to serve to the needs of the group that people were interested in more than public interest which was sufficient evidence to suggest that the rural poor, the majority of the Thai population were limited

in their access to information media while the people in the city were the overwhelming part from the relationship between the internet media and the digital space presented above.

This is a major reason for the problem of accessing digital media among rural people. In this regard, the researcher therefore sees the importance of reducing the digital inequality for the development of rural people's potential. to build readiness and strength of the community to support changes in technology and digital society for the general public to have knowledge professional skills local wisdom in life and the use of various digital tools can be used in daily life.

Objectives of the Study

1. To study the current state of **digital literacy** and access to information technology of rural people.
2. To develop training courses on **digital literacy skills** and information accessibility of rural people.
3. To study the results of using the training course on **digital literacy skills** and information accessibility of rural people

Research methodology

1. Population

Population is people who lives in 14 villages in Hua Wai Sub-district in Takhli District in Nakhon Sawan Province that study only with those are ready such as having a smartphone in Hua Wai Sub-District in Takhli District in Nakhon Sawan Province. For example, 1) the government institutions to support such as sub-district administrative organization or school 2) the infrastructure to information technology and communication 3) the efficient wireless and broadband devices 4) an existing basic volunteer to reaching people and 5) the participation at the foundation level.

The samples used in the research were 60 people 14 villages in Hua Wai Sub-district in Takhli District in Nakhon Sawan Province by using a purposive sampling.

2. Content In this study, the scope of the study was the basic knowledge of information and communication technology and access, creating and designing networks through social media and knowledge and knowledge management.

3. research tools

1. Digital Literacy Present Condition Questionnaire and access to information technology of rural people

2. Tests before and after digital literacy training and information access for rural people.

4. research process

This research project is research and development which is divided into 3 phases as follows:

Phase 1: A study of the current state of digital literacy and access to information technology among rural people has proceeded as follows:

A study of community context, the current state of urgent digital literacy according to the criteria used to determine the community which used in the study in 14 villages in Hua Wai Sub-district in Takhli District in Nakhon Sawan Province.

Phase 2: Creation of course content used for trial training course, content curriculum based on literature and the relevant theory was the digital literacy curriculum contained 6 content groups throughout the course: right and responsibility, access to digital media, understanding digital media, digital society practice, health in the digital age and digital law.

Training course development process

The process of developing this training course is divided into 4 steps: 1) study of basic information 2) curriculum creation 3) curriculum trial 4) curriculum assessment and improvement

Step 1: Study of basic information was as follows:

1. Study and analyze the framework for developing basic digital literacy for all age groups that was suitable for the context of rural people. Ministry of Digital Economy and Society was an analysis of the document which found that the policy focuses on developing people's digital awareness by providing a digital understanding and access to information technology of rural people.

2. Exploring the current state of rural people in regards to digital comprehension and access to information technology of rural people found that the current state of people towards digital comprehension had a high level to need to develop knowledge and skills.

3. Study of documents and research related to training courses studied the composition and form of training. A summary of the components of the training course was problems and needs, principles, objectives, content, training activities, training material measurement and evaluation. The format of the training course focuses on participation in accordance with the problems and needs and can be practice in real situations.

Step 2: Curriculum creation was to write a curriculum outline in accordance with the information from the study of basic information. The components of the course were problems and needs, principles, objectives, content, training activities, training material and measurement and evaluation. Then, the course outline was presented to 3 experts to assess suitability and conformity found that all components were appropriate and consistent.

Step 3: Curriculum trial was the experimental course with the sample group that was divided into 2 phases: a pilot study and curriculum trial. A pilot study of the curriculum was conducted with 15 people to study the feasibility of using the curriculum in real conditions. After that, the course was tested with a sample of rural people at 12 hours by using a single-group model that take the pretest and posttest of the course and analyze the data using basic statistics and tested with dependent t-test found that the digital cognition skill scores after the course trial were higher digital literacy skills than before training with statistics significance at .05 level.

Phase 3: A study of the results of using the digital literacy training course and information accessibility of rural people consisted of the experts review the course content, curriculum-based training to build with the community that had the pretest and posttest in training, create a course manual, used statistics, comparison of pretest and posttest results for overall, individual issues and community. The statistics used in data analysis were mean, standard deviation, paired- samples and t-test.

data analysis

1. The statistics used to check the research tools were to determine the validity of the questionnaire (IOC), to find the confidence value of the training knowledge test using Kuder Richardson's KR - 20 formula.

Results and discussion

1. The current state of digital literacy and access to information technology among rural people. It was found that the number of digital technology users has continued to increase since the activation of the Internet system. In the mid-1990s, as well as in the economic change and society that is occurring rapidly nowadays, especially in technology and digital devices such as smartphone, tablet, notebook and a wireless internet system that improves operational efficiency and improve the quality of life both at the individual level and social level. In the present, the user is not limited to the wealthy person or people live in urban areas only but also the low-income rural people and people can't read and people can read and write to use such technology that communicate and

present themselves to the society. Digital technology will act as a bridge to open up opportunities and facilitate education, access to people, take a way to earn money, career and access to information that is like another new world for users known as the “online world” which is flowing a lot of information. It is essential that users have the skills and knowledge of digital technology because the access is carried out without the user's discretion and the availability of digital technology can also have a negative effect on users. For example, the negative health effects the users allocate inappropriately or too much time to resulting in cyber harassment and bullying etc. It can be said that digital technology is like a coin with two sides. Although, it is very useful that is a tool may help reduce inequality such as the reducing inequality in education and income etc. Because of it gives the disadvantaged access to various resources to even more through digital technology and internet system that leads to self-development or a change in a person's status but it may cause inequality at the same time because it excludes certain groups of people such as rural people, the elderly and the disabled, etc. and lurking with danger that will follow to lack of judgment and digital literacy. (Miller, D. et al., 2019; Post Today, 2019; Jungsathiensap, 2019) which Hindman (2000) said that the digital communication gaps were between urban community and rural which between urban and the rural. The results showed that an individual's income, age and education were more closely related to the use of information technology than geography. Sustainable collaboration in state and technology is a manifestation of stability at all times. The research ends that the predictions turn out to impossible in contradict and determining to useful for tools to revolutionize digital communication, the transformation of information technology is a similar subject, closely related to the shaping of society, inequality in the adoption and use of information technology that is a serious in an information-based society. Those people are incompetent and unable to adopt and use information technology which can be separated from the power of business and more communication in relating to digital communication, failure to use and access information technology may lead to an understanding of life.

2. Creating training course content can be discussed as follows:

2.1 Course content has the nature of preserving right and responsibility to access the digital media, understanding the digital media, the digital society practice, good health in the digital age and digital law that the encouraging views of respect for the rights of others through new technological media which Lor and Britz (2007) commented that the information technology and communication enhances transparency and democracy by creating a public space and atmosphere

for a civil society and proposed 4 pillars of knowledge society as follows: (1) the information and communication technology and connectivity (2) the information content and accessibility (3) the infrastructure over information and communication technology and (4) potential of person. Moreover, they also added that freedom is a fundamental factor of participation in the knowledge society.

2.2 Training process and duration of training that the training was 2 days (or 12 hours) in which the knowledge of communication methods, media use, access to information sources in terms of knowledge, occupation, entertainment, politics and how to communicate, disseminate products and goods that are both theoretical and practical. It is not much wasted time that participants can participate and gain high benefits. From the research results (Kongpradit, 2010: 103-106) support the time period used for this time that a trainer is an innovative media or a new media literacy must focus on access to information by using information technology and other information infrastructures to provide information services and reach users at the highest level that promotes and supports a learning society. From this research of Thompson (2008) supports these finding that Thompson found that the emphasis on information technology over information through information technology. The optimizing uses of information technology and communication and using of new media is for all ages who have attended the training and use new media to meet their communication needs such as the young people use it to send teachers' work or the teachers use to follow students and there are both beginners to a wide range of applications. The considerations of Figueiredo, Prado and Kramer (2012) support these findings the they said the spread of information technology and communication would help to eradicate poverty and promote social justice. It can be achieved from computers that are useful to human beings such as smartphone and portable computers. The second step is to build professional potential and achievements from traditional personal computers. Bonfadelli (2002) found that educated people use the Internet more proactively in especially the emphasis on information. While uneducated people focus on entertainment activities from the internet. It will enable society to drive together that according to Floridi (2007) said that the future development of information technology and communication and the impact on human life. The information society is the boundary between online and offline will soon be over.

3. People in rural areas were higher digital literacy skills than before training with statistics significance at .05 level because of the content of the training course focuses on knowledge and develop in using information technology skill, digital tools and digital technology in correctly and safely. The tool and digital technology can be used to support learning and integrate of

information technology with life and career including realizing and understanding to change in the digital world and prepare a plan for self-adjustment from the digital citizen handbook of Wongkit rungruang (2018) said that the knowledge inequality and the utilizing digital technology skill among various people. It is one of the important inequality issues even if they have access to the internet but they lack of knowledge and the accessing and utilizing skills to inequality. For example, people who have the opportunity to learn computers are able to use the internet more than people who have never studied or educated people can use the service about the government electronics more than another. There was also a study of “Hurdles to Information Seeking: Spelling and Typographical Mistakes During Users' Online Behavior” found that the education was to indicator of using the internet that the level of education was related to spelling who higher education was less to misspelling affecting to resulting in smoother internet browsing than less educated people because spelling is an obstacle to finding information (Hargittai, 2006).

Conclusion and recommendations

1. General suggestions

1.1 The reducing inequality in society can be done for people in the same area to have the opportunity to exchange ideas through new media together.

1.2 To able to use this research to train and expand the results in other rural areas.

2. Suggestions for use

2.1 To should be organizations or local authorities to recognize the importance and provide support in various sections such as a process-driven organizations and establishing an efficient internet service network.

3. Suggestions for the next research

3.1 To should study the process of creating cooperation in the development of knowledge or skills from training until can be used to develop or solve problems of the community.

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