TECHNOLOGY LITERACY EMPOWERMENT IN UNDERDEVELOPED VILLAGE TO INCREASE PUBLIC SERVICE ACCESSIBILITY IN PULAU LAUT UTARA SUB-DISTRICT, KOTABARU REGENCY, SOUTH KALIMANTAN PROVINCE

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ABSTRACT
The initiation of technology-based public service has been started since the existence of President Instruction Number 3 of 2003 Pertaining to the Policy and Strategy of E-Government National Development as the spearhead of the technology-based public service implementation and the media of technology literacy empowerment to the community. Technology literacy empowerment must reach the extent of underdeveloped villages to achieve the positive effect of empowerment. Based upon these issues, the Author is interested to research about “THE TECHNOLOGY LITERACY EMPOWERMENT IN UNDERDEVELOPED VILLAGES TO INCREASE PUBLIC SERVICE ACCESSIBILITY IN PULAU LAUT UTARA SUB-DISTRICT, KOTABARU REGENCY, SOUTH KALIMANTAN PROVINCE”.

This research is designed to gain in-depth understanding of technology literacy empowerment to increase the awareness and knowledge of the community in underdeveloped villages and the public service accessibility through technology in Pulau Laut Utara sub-district. In this research, the Author used qualitative method with explorative research. The data-collection techniques used in this research are observation, interview, and documentation.

The results of the research showed that the technology literacy empowerment in Pulau Laut Utara Sub District is heavily affected by the cooperation between the Government, the private sector, and the community to solve the obstruction in operational and technical level to improve the accessibility of public service in Pulau Laut Utara Sub District. Based upon the research results, the Author could draw some conclusion that: first, there is a lack of awareness and knowledge of the community in the underdeveloped villages because the community does not have the orientation to utilize technology as a means to solve problems; second, legal standing of technology-based public service accessibility is direly needed especially in the underdeveloped villages while geographical and human resource quality are also an important factors that decides the technology-based public service; and third, Mobile Sub-District Internet Service (MPLIK) is a form of technology literacy empowerment program in Pulau Laut Utara sub-district, hand-in-hand with direct and indirect learning media through junior, senior, and vocation high schools and computer course institutions although there are many obstacles of the implementation.

The conclusion above serves as the foundation of the Author to offer some advices, which are: first, to implement a programme that introduces technology as a substitution of MPLIK program such as the Technology in Village program; second, to design a derivative regulation such as the Regional Regulation that supports the implementation of technology-based public service; and third, to arrange online marketing courses to the businessman and to introduce the function of technology to increase the community’s knowledge.
I. INTRODUCTION

1.1 Background

Within the concept of community empowerment, there are two kinds of empowerment: physical and nonphysical empowerment (Wresniwiro: 2007). Standing our ground long and firm, Indonesia’s freedom reached its 69 years while continuing our effort to create more and do more in the scope of community empowerment, all to protect and increase community welfare. Empowerment itself ranges from economics, education, health, socio-culture, and infrastructural perspective. Dhakidae in Mardikanto and Soebiato (2013:7) has described that empowerment is not only in the perspectives above, but also in technological empowerment such as idea, method, technique, and also the effort to fulfill the betterment of community empowerment.

Decentralization as the root of regional autonomy in Indonesia stated that self-sustaining and self-empowering are the statutory requirements to be an autonomous region. Empowerment in the definition is not only as a physical aspect, as said by Wresniwiro, but also is a sign that nonphysical aspects such as skills and knowledge must be enhanced. Unfortunately, the writer’s pre-research showed that nonphysical aspects are more difficult to empower. This could only indicate that there are more obstacles in the field, such as the remote areas, misconduct in planning or executing stage, or inability in managerial or leadership aspect.

The obstacles we face in nonphysical empowerment especially in remote areas are not the reason to lessen our mutual responsibility to increase community welfare. Empowerment is an important mandate from the Constitution of 1945 and is a responsibility of both central government and regional government to fulfill it.

In accordance to the Law Number 23 Year 2014 Pertaining to Local Government, concerning the Local Government’s responsibility in community empowerment, Local Government in compiling Mid-Term Regional Development Plan (RPJMD) must include the general policy of empowerment. Referring to Regional Regulation of Kotabaru Regency Number 02 Year 2011 Pertaining to Mid-Term Regional Development Plan (RPJMD) 2011-2015 especially in nonphysical empowerment, the Kotabaru Local Government is focused to enhance the community’s capability in technology utilization, information modernization, safe internet, and technology aid allocation to remote villages.

If we connect the success of nonphysical development and empowerment with Millennium Development Goals in general, technology utilization as a capital to develop global-scale partnership is a part of Millennium Development Goals. Millennium Development Goals according to the result of High-Level Summit in 2000 as a development goal has eight aspects, as followed (OECD, 2001:1):

- Eradicating extreme poverty and hunger by 50% in 2015;
- Achieving universal primary education for all;
- Promoting gender equality and women empowerment;
- Reduce child mortality rate;
- Improve maternal health;
- Fight against HIV/AIDS;
- Ensure environmental sustainability; and
- Develop global-scale partnership.

The role of Kotabaru Local Government as a facilitator has yet to be supported by legal protection. Legally, there is no Regional Regulation nor Regent Regulation concerning technology literacy while practically, there is a Communication, Information, and Code Agency as a subordinate of Transportation Department which executes Mobile Internet Service Center (MPLIK) that introduce technology to remote districts in Kotabaru.

The cause of technology literacy problem in Kotabaru Regency is a stagnancy where the people in remote areas such as Pulau Laut Utara sub-district can only access technology every once in a while when Mobile Internet Service Center comes. An archipelago region such as Kotabaru Regency has its own problem and obstacle to bridge people’s access to public service because
there are many isolated Pulaus which are far from the capital.

Based on the problem analysis of Kotabaru Mid-Term Regional Development Plan 2011-2015, the general capability of the community in technology literacy is lower than in any other regencies because there are many of them who do not have the access to technology. This is even more ironic because the people in remote villages such as in Sebelimbingan Village where their incapability in technology utilization is affected by limited transportation access and distance. The Local Government of Kotabaru in enhancing community’s capability in technology utilization has increased the quantity of technicians and teachers especially in technology field. Furthermore, the conceived human resources are distributed to remote areas to help the community in technology mastery. This policy is reflected in the table below, as following:

**Table 1.1**

<table>
<thead>
<tr>
<th>No</th>
<th>Formation</th>
<th>GEC Formation</th>
<th>GE Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>IT Teachers for Junior High School</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>2.</td>
<td>IT Teachers for Senior High School</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>Computer Technology Teachers for Vocational</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Computer Technician</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11 Persons</td>
<td>51 Persons</td>
</tr>
</tbody>
</table>

*Source: Regional Government Employee Agency of Kotabaru Regency 2013*

The increase in teachers and computer technician human resource is followed up by the course institution growth in technology field in spite of its limited existence and location that could not reach the remote areas. By this policy, the Local Government of Kotabaru hopes that with the increase of Government Employee with the qualification in technology, the sub-districts which are far from the capital can take the benefits from technology utilization in Kotabaru Regency.

On the other hand, enhancing general knowledge of the community in Kotabaru Regency can be a measure taken to alleviate the obstacle in bridging the access to public service. Technology mastery can obliterate the community’s powerlessness especially those in remote villages. Through technology mastery, the community especially in Pulau Laut Utara sub-district is able to communicate with others inside and outside the area of Kotabaru Regency while maintaining the access to public service.

1.2 Problems

1.2.1 Problem Identification

In regard to the core of this matter and background above, the problems that can be identified in this research are, as follow:

1) Unoptimalized technology utilization in Kotabaru Regency, especially in Pulau Laut Utara sub-district.

2) The rise of communal awareness and knowledge to increase technology utilization which has yet to grow.

3) Technology Introduction which is done through junior high school, senior high school, and vocational high school and also course institution could not reach remote areas which are far from the capital.

4) Unreadiness of Regional Regulation and other derivative regulations pertaining to technology literacy.

5) Unreachable access to technology-based public service in Pulau Laut Utara sub-district.
1.2.2 Problem Limitation

Deriving from the problem identification as defined above, the writer obtains further description of the problem that lies within this research. Unfortunately, with regard to the limited time and capability, the writer has to limit the problem with the hope to observe and obtain in-depth understanding of the focus of this research.

Meanwhile, the object of this research is limited to technology literacy empowerment for underdeveloped village to increase public service accessibility through field research in Pulau Laut Utara sub-district, Kotabaru Regency, South Borneo.

1.2.3 Problem Formulation

Based on the brief description from problem identification above, the writer is able to conclude that the problem formulations of this research are. As follow:

1) How the technology literacy empowerment is carried out to increase community awareness and knowledge in underdeveloped village within Pulau Laut Utara sub-district?
2) How is the public service accessibility for underdeveloped village through technology in Pulau Laut Utara sub-district?

1.3 Purpose and Aim

1.3.1 Purpose

The purpose of this research is to observe, analyze, study, and interpret the phenomenon in Pulau Laut Utara sub-district which is technology literacy and the efforts to bridge the access to public service in underdeveloped village.

1.3.2 Aims

The aim of a research is to gain in-depth understanding of a problem in the field and further to find the best alternative to solve the problem. The aims of this research are to, as follow:

1) To gain a keen and deep understanding of technology literacy empowerment in increasing community awareness and knowledge in underdeveloped village within the scope of Pulau Laut Utara sub-district.
2) To gain a keen and deep understanding of public service accessibility for underdeveloped village in Pulau Laut Utara sub-district.

1.4 Benefit

1.4.1 Practical Benefit for Research location

This research is encouraged to give a contribution and thought for the Local Government of Kotabaru, private sector, and the community in technology literacy empowerment for underdeveloped village in increasing public service accessibility with the hope that the true meaning of development itself can be felt by all without any discrimination.

1.5 Concept Definition

1) Empowerment

Subejo and Supriyanto (2004:12) described that the deeper meaning of empowerment itself is an intended effort to facilitate the local community in planning, deciding, and managing their local resources through collective action and networking expecting that the final result would enable them to be capable economically, ecologically, and socially through self-sustaining effort. The core approach in this empowerment concept is to place the community as the subject of development, not only as an object of empowerment projects.

Bebbington (2000:15) in compliance with the definition above, supported that empowerment can be seen through three viewpoints, which are as follow:

a) Creating a situation or climate that enables the growth of community’s full potential (enabling);
b) Strengthening the potential or resources of the community (empowering);
c) Protecting and taking the side of the weaker community without making them rely too much to the free aid programs (protecting).

2) Technology Literacy

Poedjiadi (2005:31) described that technology literacy is the ability to utilize technology wisely to solve everyday problems through the concept and utility of technology itself. In this research, technology literacy is more directed as a tool to bridge the access to
public service. Technology literacy as a need is also as a challenge in the current governance. Technology literacy has an important stand in the effort to increase the community’s quality of life as the information basis in decision-making and also in understanding the root of the community’s problem in local, regional, and national level (Bloch E in Poedjiadi: 2005:3).

As a concept that has its own measures, the Research and Human Resource Development Agency which is a subordinate of Communication and Information Department of Republic Indonesia stated that the measures of technology literacy are, as follow:

1. Ability to identify;
2. Access;
3. Managing integration;
4. Evaluation; and
5. Creation and communication.

3) Underdeveloped Village.

The Underdeveloped Area Development Department (KPDT) in a National Symposium of Underdeveloped Area Development in 2005 defined an underdeveloped region or village as a region or a village where the community and the area can be relatively measured as an underdeveloped area in comparison to any other areas as well. The Underdeveloped Area Development Department gave some criteria of how we can measure an underdeveloped area or village which are measured through economic, social, infrastructure readiness, financial capability, accessibility to public service and geographical analysis.

4) Public Service Accessibility

Sutantono (2004:1) stated that accessibility is: the right to access of basic needs service”. In this research, accessibility is prepared by the government, private sector, and the community itself. Meanwhile, the public service as defined by the Law Number 25 Year 2014 is an activity or a series of activities which are made to support the fulfillment of every person’s basic needs to public goods, service, and/or administrative service by the corresponding public service organizer.

In accordance to the results of Study and Communication and Information Development Office (BPPKI) Jakarta’s research about the implementation of technology-based public service, the increase of public service accessibility is affected by the following elements, as follow:

- Teamwork. The increase of public service accessibility through technology implementation needs mutual respect and teamwork from the corresponding parties, such as the Local Government, the legislative party, and the related institution;
- Human resource development. Increasing the quantity and quality of a competent and skilled human resource is imperative to be the qualified operator of technology-based public service; and
- Socialization and accessibility.

II. METHOD

2.1 Method

Suryana (2010: 40) stated that qualitative method is usually regarded as a post positivistic research because it tend to bend towards post positivism philosophy and has naturalistic characters. This naturalistic character is the main cause of why a qualitative research is also known as an interpretative research.

Departing onward from this general assumption, the researcher found that the main difference between qualitative and quantitative research is placed on the data ratio. This is where Danim (in Suryana, 2010: 41) defined the difference between qualitative and quantitative research, in which quantitative research uses data such as numbers and any other means of quantitative data to ascertain the hypothesis result.

In line with the definition above, explorative method according to Arikunto (2005:115) is:
Defined to be able to describe a situation or a phenomena status and in this matter, if the researcher wants to gain insight regarding the situation.

The characteristic of qualitative research itself, according to Lincoln and Guba (1985:30-44) described that qualitative research has several characteristics, which are scientific-based, human/researcher as a research instrument, uses qualitative method, the data is analyzed through inductive means, starts from basic theory, descriptive, puts process over results, limited focus, has particular criteria to ascertain data validity, temporary design, and the research result is discussed and agreed upon all.

The purpose of data-collecting is to find reference of an issue in the field and implement it in the internship. Gulo (2002:110) stated that the purpose of data-collecting itself is to gain new information needed to reach the highest goal of this research.

Qualitative research place human/researcher as an important data-collecting instrument. Researcher’s subjectivity as a human being must be set aside to obtain data validity. A human being as a data-collecting instrument must show a responsive, adaptive, whole, scientific, look for data compendium, and idiosyncratic qualities.

Sugiyono (2012:137) stated that a field researcher must sort through the data by keeping the data quality in mind, further ensured by the quality of the data-collecting and the data-collecting instrument itself. These factors would affect the validity and the reliability of the data and also the accurateness of the researcher’s data.

2.2 Data Collection

The data collection in this research will be carried out by these techniques, as follow:

1) Primary Data
Primary data in this research will be collected through field observation method and direct interview to each related party. Primary data, according to Sugiyono (2012:139), is a:
“Primary resource is a source of data that gives direct respond to the researcher”

a) Observation

The role of the writer in the observation is as the observer based on the given role of a researcher, as said by Junker (in Patton, 1980:131-132). In this research, the observed locations will be the activities within the scope of Pulau Laut Utara sub-district which is related to the internet utilization in which this observation would lead to the natural situation of the field research and also how Pulau Laut Utara sub-district’s effort to empower technology literacy for underdeveloped village to bridge public service accessibility. The observed locations would be the location which is visited by the Mobile Internet Service Center, junior and senior high schools that introduce technology utilization in each respective location, computer course institutions, and the local community in Pulau Laut Utara sub-district.

b) Interview
Interview is an intended conversation between the researcher and the source in a session of questioning and answering. Patton (1980:197) divided interview based on the question plans. In this research. The intended sources which are related to the phenomena are, as follow:

1. The Head of Pulau Laut Utara sub-district, Kotabaru Regency;
2. The Head of underdeveloped village within the scoop of Pulau Laut Utara sub-district;
3. The teachers of IT and computer technician subjects in Pulau Laut Utara
sub-district, Kotabaru Regency about 2 persons;
4. The manager of computer course institutions about 2 persons; and
5. The local community in Pulau Laut Utara sub-district, Kotabaru Regency about 24 persons.

2) Secondary Data
According to Lofland and Lofland (1984:47), secondary data in which they respectively called as ‘document’ has a limited and an extensive meanings, in which an extensive data is each and every written or spoken data and a limited data is each and every written data. Moreover, Renier divided document into two kinds, textual document (memo, instruction, announcement, report, magazine, book, newspaper, and catalog) and non-textual document (map, graphics, figures, records, video, and film).

III. ANALYSIS AND RECOMMENDATIONS
3.1 Analysis
3.1.1 Technology Literacy Empowerment to Increase Awareness and Community Knowledge in Underdeveloped Village in the Sub District of Pulau Laut Utara

According to Subejo and Supriyanto (2004: 12), the meaning of empowerment is a deliberate effort to facilitate local communities in planning, deciding, and managing owned local resources through collective action and networking so that they have the ability and independence economically, ecologically, and socially, especially the weak community. Bebbington (2000: 15) further explains that community empowerment can be seen from three sides, namely:
a) Creating an atmosphere or climate that allows the community’s potentials to develop (enabling);
b) Empowering the community’s potentials or power (empowering); and

c) Protecting and taking side in favor of the vulnerable community without making them dependent on the program (protecting).

Based on the above definition of empowerment, the author can draw the conclusion that empowerment is a deliberate effort of the government, the private sector, and the public in order to provide opportunities, strengthen the potentials, and protect vulnerable groups to achieve social independence, ecology, and economics.

In order for technology literacy empowerment in improving the accessibility of public services goes well, the National Research Council reveals that the concept of community empowerment with the use of technology has a close relationship with information literacy and computer literacy (Washington, DC: National Academy Press, 1999). Information literacy and computer literacy will allow a community to be a technological community.

Based on the above definition, the author can draw the conclusion that the technology literacy empowerment to create a society that is empowered by technology, then also have to empower the community through information literacy and computer literacy.

Creating a technologically empowered society requires planning and sustainable development. Governments both at national and local levels have been referring to the Law No. 17 of 2007 on the National Long-Term Development Plan 2005-2025 that proclaims the development direction of Information and Communication sector by building an Indonesian knowledge-based society which is referred to as the Indonesian Information Society by 2025.

Although the Indonesian government's attention to the new technology literacy emerged after the issuance of Presidential Decree No. 3 year 2003 on National Policy and Strategy Development of E-Government, historical searches showed that technology literacy in community empowerment has been proclaimed in the New Order era in MPR RI Decree No. II / MPR / 1993 on State Policy Guidelines. In the New Order era, technological literacy is one of the programs in Repelita (Five-Year Development Plan).
Relevance of the Repelita program from the New Order governance with the Reformation era is connected by the Presidential Instruction Number 3 year 2003 on National Policy and Strategy Development of E-Government. In this regulation, to implement sustainable development, the government began implementing E-Government which in turn is regulated by Law Number 11 year 2008 on Information and Electronic Transactions and Government Regulation Number 82 Year 2012 on the Implementation System and Electronic Transactions.

Implementation of the above regulations in the life of the state and society can be seen in the process of community empowerment, especially the community in underdeveloped villages. Unfortunately, until now there has been no regional regulation or other derivatives regulation in the sub District of Pulau Laut Utara and even in Kotabaru District on regulations related to technology literacy in community empowerment.

The shortcoming above causes the community empowerment through the utilization of technology has not run optimally. The main deficiency in technology literacy empowerment in the sub District of Pulau Laut Utara lies in not maximal utilization of technological literacy in the public service and the complexity of the area in the Sub District of Pulau Laut Utara which has urban areas, mountains, and the offshore waters. Technological literacy empowerment program that has been implemented in the sub District of Pulau Laut Utara is a sub District Internet Service Car program (MPLIK) which will be explained further.

a. Sub District Internet Services Car Program (MPLIK)

As comparison between legislation and reality on the field, raising awareness and knowledge of the community with the utilization of technology literacy is very dependent on government policies of sub District of Pulau Laut Utara as a facilitator of community empowerment. Therefore, as the first step in empowering the community with the utilization of technology literacy, Sub District Internet Service Car program (MPLIK) was launched to help people in remote villages to understand the technology.

As a part of the government program to increase knowledge and awareness of the community in order to empower the technology community, the Sub District Internet Service Car program (MPLIK) is a program initiated by the Ministry of Communications and Information Technology (Kominfo). MPLIK is the mandate of the Minister of Communication and Information Technology Number 19 year 2010 Concerning Internet Access Service Provider in Sub District Internet Telecommunication Universal Service Area that focuses on the expansion of the Internet and the introduction of equity for remote villages.

Regulation of the Minister of Communication and Information Technology Number 19 / PER / M.KOMINFO / 12/2010, is designed to support the expansion of Internet service access and as an accelerated increase in the accessibility of services as well as to encourage people, especially people living in remote villages in using of technology. It can be seen that with this regulation, the government hopes that technological literacy can improve the knowledge of society and gradually increase the public awareness about the importance of technology in the era of globalization.

According to Article 2 in Perkominfo Number 19 year 2010, the sub District Internet service providers (PLIK) centered on the capital sub district in each region of MPLIK program target, especially in the sub District of Pulau Laut Utara, Kotabaru District. Since the MPLIK program began in the sub District of Pulau Laut Utara, the MPLIK program has been running effectively in February 2014 and has visited several remote villages in the sub district of Pulau Laut Utara, like Megasari Village which is a village located in the mountainous region of sub District of Pulau Laut Utara.

This sub district internet service activity is intended to introduce and provide socialization for people, especially students and the community who are farmers. The purpose of choosing the student and farming communities in the introduction and dissemination of this is to expand the knowledge and awareness of these two communities that will positively impact the progress of the region. Implementation of dissemination activity and the introduction of the Internet to increase awareness and knowledge of the community in the sub District of Pulau Laut Utara which is primarily intended for farmers, students and businesses has a major impact on changes in the orientation of the local economy.

As quoted from the website of the Information, Communication, and Code Agency of
Kotabaru District (Bakiasda) in an article dated February 19, 2014, in which the positive effects of MPLIK presence began to be felt by the farming community. Farming communities that previously were confused with knowledge and appropriate technology (TTG) in the agricultural sector, especially the way of farming with limited capital, can now know the latest techniques in farming through the internet that has been provided in the MPLIK program. MPLIK benefits are also felt by students in Mekarsari Village, sub District of Pulau Laut Utara that do not have internet.

The improvement of society economic orientation is one of the objectives of MPLIK program by involving business doers. Small and medium business doers may cooperate with PLIK providers in a sub district that implement the MPLIK program in the operation and maintenance of the facility, in accordance with Article 12 Paragraph 1 of the Regulation of the Minister of Communication and Information Technology Number 19 / PER / M.KOMINFO / 12/2010.

MPLIK program as a part of the author’s observation scope has carried out several visits for internet services and dissemination to people in remote villages not only in the sub District of Pulau Laut Utara, but also some other sub districts. For detailed implementation of MPLIK activities, can be seen in the table below:

**TABLE 1**
**IMPLEMENTATION OF MPLIK ACTIVITY IN KOTABARU DISTRICT IN 2014**

<table>
<thead>
<tr>
<th>NO</th>
<th>DATE OF ACTIVITY</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>February 19, 2014</td>
<td>Sungai Limau Village, Pulau Laut Timur sub district</td>
</tr>
<tr>
<td>2</td>
<td>May 02, 2014</td>
<td>Lontar Village, Pulau Laut Barat sub district</td>
</tr>
<tr>
<td>3</td>
<td>May 02, 2014</td>
<td>Sungai Pasir Village, Pulau Laut Tengah sub district</td>
</tr>
<tr>
<td>4</td>
<td>May 07, 2014</td>
<td>Malangkaian Village, Hampang sub district</td>
</tr>
<tr>
<td>5</td>
<td>May 05, 2014</td>
<td>Megasari Village, Pulau Laut Utara sub district</td>
</tr>
</tbody>
</table>


Pulau Laut Utara sub District area is as one of the sub districts that implement MPLIK program assisted by the Agency of Communication, Information, and Code of Kotabaru District has two (2) PLIK cars either managed by the local government or by UKM. Two PLIK cars in the sub District of Pulau Laut Utara are strategically located in Kotabaru Hilir Village and Stagen Village that are two midpoint between the northwest and north of the sub District of Pulau Laut Utara where remote villages are located.

However, as part of central government programs to increase knowledge and awareness of the community in remote villages of the technology, the MPLIK program encounters many challenges in its implementation, one of which is the difficulty of monitoring the implementation of the MPLIK program. Although it was officially discontinued by the Ministry of Communications and Information Technology in February 2015, the MPLIK program itself in the sub District of Pulau Laut Utara and overall Kotabaru District was discontinued in May 2014 after the merger of the Agency of Communication, Information, and Code (Bakiasda) with the Department of Transportation of Kotabaru District.

Until now, there is no substitute of MPLIK program in the sub District of Pulau Laut Utara so that the society at large has not yet felt the positive impact of the program. The government has not set replacement program for MPLIK that can reach communities in underdeveloped villages. The government of Pulau Laut Utara sub District, the private sector and the public need to implement...
other programs that can encourage people to realize the importance of technological literacy, especially in the era of globalization and the ASEAN Free Trade Area in 2015.

However, in the sub District of Pulau Laut Utara and even in Kotabaru District, there has not been any non-Governmental Organizations (NGOs) that are specifically related to technology literacy empowerment. The absence of NGOs working on technology literacy indicates that the condition of the people in the sub District of Pulau Laut Utara has not implemented the technology as a tool for problem-solving and decision-making as well as the opening of economic opportunities. Technology in the sub District of Pulau Laut Utara is still regarded as a facility that can only be enjoyed by people who are close to the capital of sub district.

The stigma that technology can only be enjoyed by people who are close to the capital district can be removed gradually and progressively by developing technology literacy as a condition that people in underdeveloped villages can take advantage of technology in everyday life. Development of technology literacy as a requirement of technology utilization can be explained further.

b. Technology Literacy Development

To increase awareness and knowledge of the society through technological literacy empowerment needs to be executed by all parties, including government, private sector and the public. The government of Pulau Laut Utara sub District in increasing knowledge and awareness requires active participation of the private sector and the public to achieve a participatory community development.

Developing technology literacy can be seen by the establishment of institutions that implement technology-based community development, although in the sub District of Pulau Laut Utara, it is limited to secondary schools and computer course institutions to encourage public interest in technological literacy.

In accordance with the results of the National Research Council study on technological literacy (Washington, DC: National Academy Press, 1999), what influence a technology literacy is basically, among other things:
1. Information Literacy; and
2. Computer Literacy.

Both information literacy and computer literacy require serious treatment from the various parties. Because good information literacy will support the distribution and dissemination of information from the city to the village in an area as complex as the sub District of Pulau Laut Utara will be faster. Due to the good computer literacy, it will facilitate the boys and girls in the area of remote villages to get a decent job. Information literacy and computer literacy that support technology literacy enhancement will facilitate an area for better preparation for the quality of its human resources to face the era of globalization and the ASEAN Free Trade Area in 2015.

To implement technological literacy empowerment requires the role of secondary schools and computer course institutions to increase public interest in the technology literacy. Phenomena that occur in the field show that the public interest in technological literacy increased at a certain time and was usually associated with the benefits capabilities of technological literacy to improve the community quality of life, especially people living in remote areas. This happens because the job opportunities can be increased with the mastery of technology.

Based on a phenomenological viewpoint in the field, it can be seen that the increase of knowledge and awareness for the technology literacy has benefits, among other things:
1. Increase the job opportunities;
2. Open business opportunities;
3. Create ready to work individuals; and
4. Increase community’s capability to absorb information.

In connection with the benefits of the community’s awareness and knowledge development in remote areas, to expand people's access to education is required thing to do. Formal and non-formal education about technological literacy can be done through the media of secondary schools and computer course institutions.

Sub District of Pulau Laut Utara has some computer courses and one secondary vocational school that aim to specifically improve the specialization of students and course participants in technological literacy, which the author focuses on the LPK Mangala, MIP Kotabaru, and SMK 1 Kotabaru as the implementers of technology literacy for students and the course participants.
The three educational institutions above show different results because they are influenced by the status of the institution in which there are institutions run by the government and some others by the private sector. SMKN 1 Kotabaru as a formal educational institution is managed by the Department of Education Kotabaru District and has complete computer lab facilities. It shows that the students’ orientation of technological literacy is intended to be ready to work human resources but likely to continue to higher education in the field of technology.

While the other two institutions are privately managed which are Mangala LPK and MIP Kotabaru with the area courses and limited facilities produce course participant graduates that have been equipped with the ability to operate a computer and are directed to get into the job market by having internship in some companies that have cooperation with the courses that are scattered throughout the Kotabaru district.

The existence of institutions that implement technological literacy empowerment has improved the living standards of the community and meet the needs of private companies for human resources that have good technology literacy. Broadly speaking, we could conclude that the differences in status and facilities was the problem faced by the managers of these institutions to improve the technology literacy.

In the Beni Romanus’ opinion (Kompas: 2002), a phenomenon in the field indicate that the impacts of technology literacy in community empowerment, especially to increase awareness and knowledge, among other things:

1. Advancing the field of education;
   Litecy empowerment technology can significantly advance the field of education. With the technology at a school facility and institute courses, capability and awareness in advancing knowledge and education will also be developed in accordance with the era. In the era of globalization, the role of technology as a tool to promote education is imperative for closer access to knowledge and information.

   Technological literacy development in the sub District of Pulau Laut Utara, especially in raising public awareness and knowledge is supported by the participation of government agencies such as SMK 1 Kotabaru and Communication, Information, and Code Agency (Bakiasda) Kotabaru District and the sub District Internet Services Car’s existence and private institutions such as LPK Mangala and MIP Kotabaru as institutions of non-formal technology educational.

   Nevertheless, the positive impact of technological literacy in the sub District of Pulau Laut Utara cannot be perceived by the public in remote villages maximally. Reality on the ground that has been felt by the author is the lack of public awareness in remote villages to utilize technology in the field of economics as to open an online store and market the products featured in the remote villages.

   The phenomenon of the object of research in the field is the existence of stigma growing in the community that the utilization of technology can only be enjoyed by people who are located close to the capital sub district. The stigma is not entirely wrong because field observations conducted by the author also concluded that access to technology such as the Internet is difficult in remote villages like Sebelimbingan Village due to the absence of the tower.

   Another consideration why literacy is indispensable technology in advancing the field of education, especially in communities in remote villages is also in accordance with the purpose embodied in Law Number 14 year 2008 Article 3 Paragraph 6, which states that:

   “The goal of the information is to develop science and intellectual life of the nation.”

2. Changing the characteristics of searching and working patterns;

   The development of technology literacy in a society is
expected to change the paradigm of manual work into automated so that it becomes faster, efficient, effective, and practical as well as changing the characteristics of job seekers with job search information disclosure through the use of technology.

Characteristics of job search in the sub District of Laut Utara Pulau is still very dependent on the Regional Government, where the job seekers are just waiting for the information manually. With the utilization of technology literacy, job seekers have more open opportunities to access job opportunities both from government and from the private sector.

The phenomenon that the author found in the field that is the motivation of people in remote areas to attend a computer course that is in the capital sub district like at LPK Mangala and MIP Kotabaru. Most of the course participants come from remote areas around the sub District of Laut Utara Pulau and even from outside the sub district. This motivation makes it easier for people in remote areas to change the characteristics of their job search.

The result expected from the easy access to information about job opportunities is a change in the mindset of the people, especially the people who are in remote villages on job opportunities and work patterns.

3. Spreading knowledge more efficiently and evenly;

Dissemination of information in the form of knowledge is easier to do with the technology literacy. Efficiency and equity dissemination of knowledge can be done through electronic media such as online sites and direct learning media as done by SMKN 1 Kotabaru.

Both of the above media are vital to spread knowledge efficiently and evenly, either directly through the school or indirectly through an online site. The role of the direct and indirect media has positive and negative sides.

Negative side of the direct media of knowledge dissemination is on the lack of infrastructure technology owned by the students. Based on the author’s observations in SMKN 1 Kotabaru, the students mostly come from the underdeveloped villages who enter the vocational school to get ready for work skills, but after school they do not have the means to learn more about the technology at home and there are some students who are technology stutter. While the positive side of direct media through the school is that students can learn about technology literacy with computer laboratory facilities that are complete and free of charge.

Negative side of indirect media dissemination of knowledge through online sites is on the difficulty of monitoring the access to online sites. While the positive side of the existence of indirect media is easy access and low costs.

4. Changing the ways to improve the society’s knowledge;

Changes in implementing ways to improve public education lies in the paradigm of knowledge itself that becomes more divergent and scientific. Previously, ways to increase public knowledge is limited to the direct increase from mouth to mouth and learning in the classroom.

According to Habermas (MIT Press: 2002), after the paradigm changes, knowledge is considered as emancipatory knowledge. This knowledge paradigm puts knowledge as an effort of the humanization process, especially the people who are in remote areas. Literacy technology can be used as a tool to improve public education, which in the sub District of Pulau Laut Utara was implemented in the village of
Sarang Tiung as technological innovation village in collaboration with the Ministry of Maritime and Fisheries Affairs.

5. Encouraging progress in the creation of tools to disseminate and access new knowledge.

Before the advent of technological literacy, the tools to disseminate knowledge and information were limited only to the physical shape of tools such as a printed book. Advancement of technology literacy empowerment can encourage the creation of tools to disseminate and access knowledge that does not depend on the physical form, such as the advent of e-books in an attempt to overcome the weaknesses of printed books.

This progress cannot be felt significantly in the sub District of Pulau Laut Utara because of factors that affect the difficulty of the deployment of new knowledge which is the lack of public interest. People in remote areas have not put technology literacy as a tool for disseminating and accessing new knowledge.

3.1.2 Accessibility of Public Services for Underdeveloped Villages through Technology in the sub District of Pulau Laut Utara

Pulau Laut Utara sub District Office is the primary basis for the utilization of technology in technology – based public service. Implementation of technology-based services in Pulau Laut Utara sub District Office is non-license services such as e-ID card and Certificate because for license services are transferred to Satu Pintu Service Office located in the district capital.

Law Number. 25 year 2009 on Public Service has been equipped with several derivatives legislation that reflects the legal umbrella for the utilization of technology in service. Legislation related to the application of technological literacy in the public service are, among others:

1. Law No. 11 Year 2008 on Information and Electronic Transactions;

Specifically mentioned in Article 4 Paragraph 3 that the purpose of the utilization of technology, information, and electronic transactions is to improve the effectiveness and efficiency of public services.

2. Government Regulation Number 82 Year 2012 on the Implementation System and Electronic Transactions;

Specifically mentioned in Article 3, Paragraph 2 that the implementation of the electronic system can be used to perform public service and non-public services, where the focus of public services is on licensing and non-licensing public services.

3. Presidential Instruction Number 3 year 2003 on National Policy and Strategy Development of E-Government;

Specifically mentioned in the preamble that the consideration of the need for the development of E-Government is to organize good governance and improve public services effectively and efficiently.


Specifically mentioned in Article 6 that the licensing public service providers organized by the Integrated Licensing Services and Investment (BPPTPM) and non-licensing services organized by SKPDs. Therefore, Laut Utara Pulau sub District Office is to implement the non-licensing services.

Additionally, as described in Article 11 and Article 12 of Kotabaru District Regulation Number 03 year 2013 that the sub District of Laut Utara Pulau Office as a non-licensing public service providers requires infrastructure development in accordance with the advancement of technology.

Public services can be accessed by all the people in the sub District of Pulau Laut Utara through the Pulau Laut Utara sub District Office as an SKPD that provides public service. The ability
of the Pulau Laut Utara sub District Office to implement technology-based public services should conform to the purpose of technology utilization tailored to the functions and capabilities.

Pulau Laut Utara sub District Office has started the implementation of the non-licensing -based technology public services which are E-ID card recording services and Certificate although not yet maximal. Non-licensing public services in the Pulau Laut Utara sub District Office are relatively smooth and flexible because of the human resources staff of Pulau Laut Utara sub District Office that do not make it difficult for the people who come to ask for non-licensing services.

The flow of non-licensing public services are manually managed and archived due to the lack of capability of personnel to operate the computer, where there are only a few apprentices who can operate computer. Although in practice the phenomenon of public services in the Pulau Laut Utara sub District Office can be categorized smooth, no derivative regulation of Law Number 11 year 2008 and Government Regulation Number 82 year 2012 in the Kotabaru district and Pulau Laut Utara sub-district.

Non-licensing based technology services in the Pulau Laut Utara sub District Office are still limited in regulative because of the absence of legal protection, the derivative of the two regulation above. The negative effect of the absence of derivative regulation on technology-based public services is also hampered by the complexity of the area in Pulau Laut Utara sub District which complicates mobile public services after the MPLIK program was terminated.

However, there is a pattern regarding public services in the Pulau Laut Utara sub District Office. This pattern is that although the use of technology literacy to bring public access close to public services, especially people living in remote villages began to start, people still come to the Pulau Laut Utara sub District Office to request the service.

Based on the author’s observations in the Pulau Laut Utara sub District Office, the face-to-face process between the service providers with the community who ask for the services still persists although the utilization of technology literacy in the service has been executed. This technology literacy utilization occupies a role in storing data of all services implemented in the Pulau Laut Utara sub District Office, accelerate non-licensing services such as Certificate of E-ID card recording, and assist in the process of E-ID card recording.

Based on the research of Development Institute for Communication and Information (BPPKI) Jakarta regarding the implementation of public services through technology, improved accessibility of public services through technology can be done if there are the following elements, namely:

- **Cooperation.** To improve the quality of public services through the implementation of technology needs cooperation of various parties, both from the government and private sector as well as the public;
- **Increased HR.** To increase the quantity and quality of human resources (HR) that have the competence and expertise related to qualification as the executors of technology based public services; and
- **Dissemination and accessibility.**

Implementing technology-based public services for underdeveloped villages begins with improving the accessibility of technology for underdeveloped villages effectively and also improving their access to information literacy and computer literacy. Empowering communities in information and computer requires supportive and gradual cooperation between government, the private sector and the public in the system of good governance.

In practice, the phenomenon of cooperation to increase the quality of public services through the application of technology for underdeveloped villages is largely influenced by the interaction between local governments and institutions with a courses scattered throughout the Kotabaru district. Application of this cooperation can be seen in the physical and non-physical forms.

Based on the author’s observations, the phenomenon of cooperation between local governments and companies is visible because the private sector, namely PT. Arutmin cooperates with local governments through the provision of funds for development of rural offices especially underdeveloped villages, the Sigam Village and the Tirawan Village.

Based on the interview with Mr. Heryandi as the manager of the MIP Kotabaru course on January 31, 2015 at 12:49 pm, the phenomenon of cooperation between the private sector and MIP Kotabaru course is non-physical...
and more associated with the empowerment of human resources and employment opportunities. The course graduates produced by MIP Kotabaru are directed to follow advanced vocational training and apprenticeship organized by MIP Kotabaru in collaboration with several private parties such as PT. Arutmin, PT. SILO, PT. Levest Bekasi, PT. Indocement, and PT. Sebuku Group.

The important thing to note is that most of the people who attend a computer course come from underdeveloped villages throughout Kotabaru and Tanah Bumbu districts. Therefore, in addition to empowering people in technological literacy, cooperation between agencies and the company also plays roles in providing job vacancy.

Dissemination and accessibility of public services have been summarized in the Sub District Internet Services Car program (MPLIK), which has been terminated since May 2014. Besides introducing the Internet to underdeveloped villages in the sub district of Pulau Laut Utara, MPLIK also disseminates the sites of Kotabaru District Government which can be accessed by the public to obtain information about the electronic public services, such as e-Tendering, E-Commerce, E-Budgeting, and E-Procurement that are still running until today.

3.2 Recommendations

3.2.1 Conclusion

Based on the description of the data analysis results on Technology Literacy Empowerment for Underdeveloped Villages in Improving Accessibility of Public Services in Pulau Laut Utara sub District, Kotabaru District, South Kalimantan province, it can be concluded as follows:

1. Technology literacy empowerment program in Pulau Laut Utara sub District has ever been implemented in the form of Sub District Internet Services Car program (MPLIK) as well as direct and indirect learning media through secondary schools and institutions of computer courses. The programs above are still having problems in the implementation because MPLIK program has been discontinued and there is no replacement program. While secondary schools and institutions of computer courses also encounter problems in the operational and technical levels.

2. Technology-based Accessibility of public services, especially for underdeveloped villages in Pulau Laut Utara sub district is affected by the prevailing legal framework. In regulative, there have been no regional regulations that have derivative rules for regulations that govern the technology based public services. Besides being hindered regulatory, technology-based accessibility of public services is also hindered by the geographical factor which is the complexity of Pulau Laut Utara sub district. In term of personnel, technology-based public services in Pulau Laut Utara sub District Office as the provider of non-licensing services, experience shortage of human resources who can operate a computer.

3. Awareness and knowledge of the community in technology literacy are the key in empowering information society. In Pulau Laut Utara sub District, the public interest in technological literacy is still low, especially people who are in underdeveloped villages because community technology orientation in underdeveloped villages is restricted to the utilization of technology as a means of communication, has not shown the utilization of technology for solving daily problems.

3.2.2 Suggestions

Based on these conclusions, the author can give the suggestions on Technology Literacy Empowerment for Underdeveloped Villages in Improving Accessibility of Public Services in Pulau Laut Utara sub District, Kotabaru District, South Kalimantan province, as follows:

1. Implement a technology introduction program that can replace MPLIK program like Technology Enters Village program because the people who are in underdeveloped villages still require dissemination of technology, especially the internet which is intended for students, farmers, and businesses. The technology introduction program can be the beginning of the paradigm shift of the people in underdeveloped villages in order to have a technology orientation as
a medium to improve the knowledge and economic opportunities.

In addition, to overcome the obstacles in the operational and technical level, the secondary schools and computer courses should be facilitated in term of infrastructure by local governments, the private sector, and the public.

2. Designing a derivative form of legal protection in the forms Regional Regulations to support the implementation of technology-based public services in local government levels and carry out the mandate of legislation that has been set on the application of technological literacy in the public service. Legal framework serves as the basis for the legality of the governance implementation, which in this study was a community development in the field of technological literacy and public services.

The challenge of complexity regions in Laut Utara Pulau sub District can be overcome if the whole region is connected with information and communication systems facilitated by the utilization of technology, so that both the government, and the private sector as well as the public must work together to overcome these challenges.

The lack of personnel on the staff of Laut Utara Pulau sub District who can operate the computer in the service requires basic computer training program at least Microsoft Word and Microsoft Excel because Microsoft Word is required in the process of daily public services and Microsoft Excel is required to accelerate the process of preparing the RKA (Budget Plan) after the annual Musrenbang is held.

3. The main problem of the lack of public interest in the technology literacy is the technology-oriented society, especially in underdeveloped villages that still consider the technology only as a means of communication. It is suggested that marketing online training be held for business people in underdeveloped villages in Pulau Laut Utara sub district to increase their market coverage and the introduction of the technology function to improve public education, especially for students and changing work patterns and mindset of the public about the benefits of technological literacy, especially for farmers so as to improve the welfare of farmers in Pulau Laut Utara sub District.

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