

Digital Literacy of Women as the Cadres of Community Empowerment in Rural Areas

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Relying on the quantitative descriptive approach, this study is presented in the form a percentage as the result of a survey distributed to 94 cadres of community empowerment in Citeurep Village of Dayeuhkolot Sub-district, Bandung Regency. This study collected the data from a questionnaire and took the sample by using quota and incidental sampling techniques. In today's era of digitalization, the ability to open up has become a crucial matter, particularly in terms of searching for information from various channels. Women in rural areas are acknowledged as incompetent and poor in this aspect of knowledge due to their level of education, lack of productive age and access difficulty. However, the research finding show that technology literacy skills have rapidly entered the rural areas. Most women as the cadres of community empowerment do not pursue a higher degree and rather, gain knowledge from the current technological development, e.g., smartphones and computers connected to the internet. Digital literacy for the cadres plays an indispensable role related to their duties and functions in facilitating their society to learn and be skilful. Digital literacy analyzed in this study consists of basic skills and attitude/perspective to technology. Based on the survey result, women in rural areas, especially cadres, have reached digital literacy; they actively use technological devices to learn and work in their jobs. This indicates that a woman's pathway to skill development to become a cadre of an organization is through utilizing Information Technology communication skills in order to source references and to interact with other stakeholders.

Key words: *Digital literacy, community empowerment.*

Introduction

The development of Information and Communication Technology (ICT) serves as the foundation of modern life in today's society. The history of industrial revolution development since the first industrial revolution and from 1975 in particular, to the current industrial revolution 4.0 has brought much change in people's lives. The Industrial Revolution 4.0 was initiated by Germany when the Hannover Fair was held in 2011 to promote computerized manufacturing (Kagermann, Lukas, Wahlster, & Lukas, 2015). The development of Industrial Revolution 4.0 combines automation technology with cyber technology so that this era is also known as the era of super computer or artificial intelligence and its' impact on industrial, political, economic and governmental aspects is phenomenal. Innovation has rapidly entered remote areas due to the geographic condition in which anyone can take advantage of technological access. The development of Industrial Revolution 4.0 in the society involves the utilization of social media, e.g., YouTube, Instagram, Telegram, WhatsApp and the like. Data processing and speed are vastly taken into account to facilitate the process of communication and to obtain information accurately and efficiently.

The synthesis of the Industrial Revolution 4.0 will produce prosperous people in development; meanwhile, the concurrent mental revolution will generate quality and superior human beings (Suwardana, 2018). Encountering the era 4.0 requires adaptive skills for the needs of the millennial, specifically the aspects of education and community empowerment which are more accessible and contextual, and this must be accomplished without real sacrifice to the protection of Indonesian traditions and cultures (Gazali, 2018). In addition, women's literacy skills are generally higher than men's in the development of technology due to their level of skill and education, language issues, time limitation and cultural and social norms. They are also however, stereotyped as being sexually attractive and subjected to sexual harassment (Wahyuningtyas & Adi, 2016). The efforts to improve media literacy for women in rural areas have been consistently posed because they tend to be less discerning in dealing with television as electronic media. Women in rural areas lack knowledge of their rights in criticizing and monitoring television shows (Perdesaan & Peran, 2016). The struggle for women's independence and involvement in public decisions is strongly influenced by economic independence (Prantiasih, 2014). The literacy skill of women in rural areas still falls into a low category; thus, they attempt to participate in the existing local potentials and local wisdom (Nurwahidah, 2017), (Wahyuni, Machfudz, & Badrih, 2017). ICT Literacy of women in rural areas is quite weaker than the Xers and Millennial (Imran, 2010).

Concerning the women's issue of such digital literacy, several programs to enhance women's independence in rural areas have emerged. Those programs comprise training and involvement of women in organizations or making them the cadres of certain organizations. Women's involvement in organizations enables them to communicate and to actively use social media or

Information Technology. Communication in organizations can make women more independent in discovering information sources and data when it comes to solving a problem.

Digital literacy skills for women is not only about their capability to read and write by utilizing digitalization but also their basic skill and attitude/perspective towards technology. Digital literacy involves more than the ability to use software or operate digital devices; it encompasses complex cognitive, motor, sociological and emotional skills that are needed by the user to be effectively functioned in the digital environment (Eshet-alkalai, 2004). Digitalization has greatly affected people's lives, including its influence on the economy and entrepreneurship. This present study discusses the result of a survey distributed to women as the cadres of community empowerment program in rural areas. It analyzes basic skill and attitude/perspective of the women towards technology. Employing the quantitative descriptive approach, this study is presented in the form of a percentage to reveal the tendency of action or behaviour in that women's digital literacy in rural areas does not always fall into a low category.

Method of Study

This study relied on a quantitative descriptive approach to determine the tendency of respondent statements regarding their basic skill and attitude in utilizing information technology. The respondents were 94 female cadres in rural areas who actively participated in the community empowerment program. This study collected the data from a questionnaire and took the sample by using quota and incidental sampling techniques. To interpret the percentage data, this study used the following Guilford table as presented in Table 1 below:

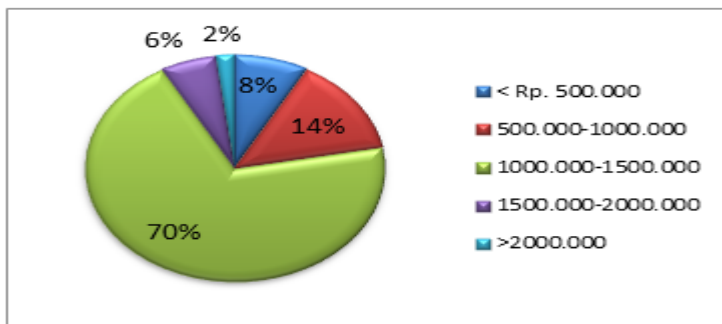
Table 1: Proportion Value of Guilford Table

Proportion	Description
0.00. 0.19	Very Low
0.20. 0.39	Low
0.40. 0.69	Moderate
0.70. 0.89	High
0.90. 1.00	Very High

Results of Study

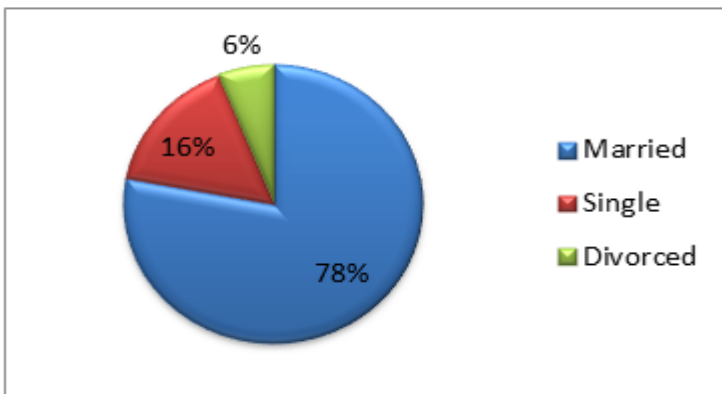
The survey result shows that the monthly gross income of female cadres of community empowerment is Rp1,000,000 – 1,500,000 / month, or in a high category (70%). On the other hand, the very low category (below 14%) is the income of < Rp 500,000, Rp 500,000-Rp1,000,000, Rp 1,500,000-Rp2,000,000, and > Rp 2,000,000. This is presented in Graph 1 below.

Graph 1. Average Income of Female Cadres in Rural Areas



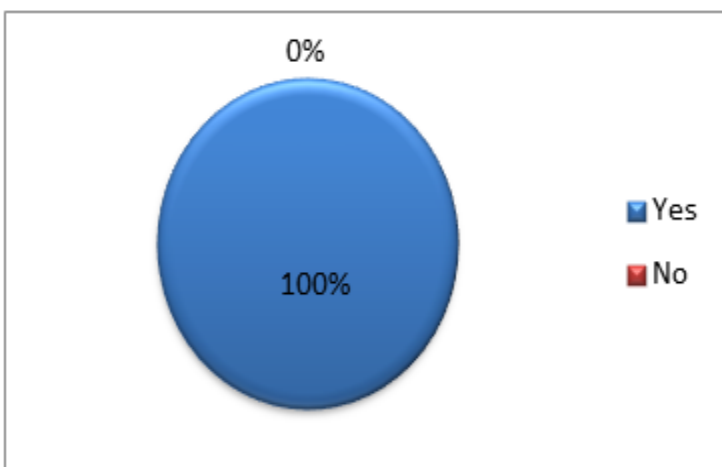
Overall, 78% of the women as the cadres (very high category) are married and less than 16% (very low category) are single or divorced as shown in the following Graph 2.

Graph 2. Marital Status of Female Cadres



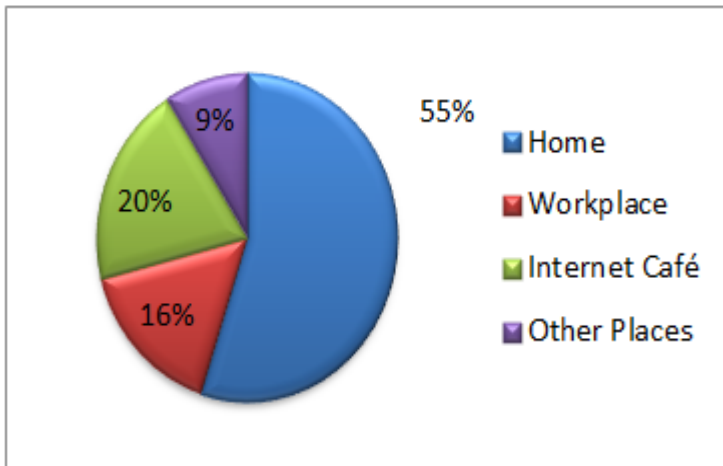
All female cadres in rural areas have opened up to the cyberspace in that they already use the internet as presented in Graph 3 below.

Graph 3. The Use of the Internet



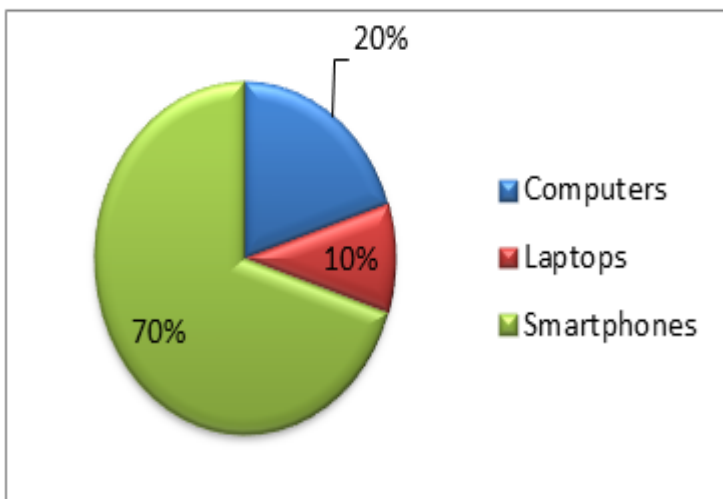
The female cadres are able to browse information by utilizing the internet at home (55%, moderate category), at Internet cafes (20%, low category), at the workplace and other places (less than 16%, very low category). This is presented in Graph 4 below.

Graph 4. Internet Access Place



Female cadres accessed the internet for the first time via smartphones (70%, high category), computers (20%, low category) and laptops (10%, very low category) as presented Graph 5 below.

Graph 5. First Time Accessing the Internet

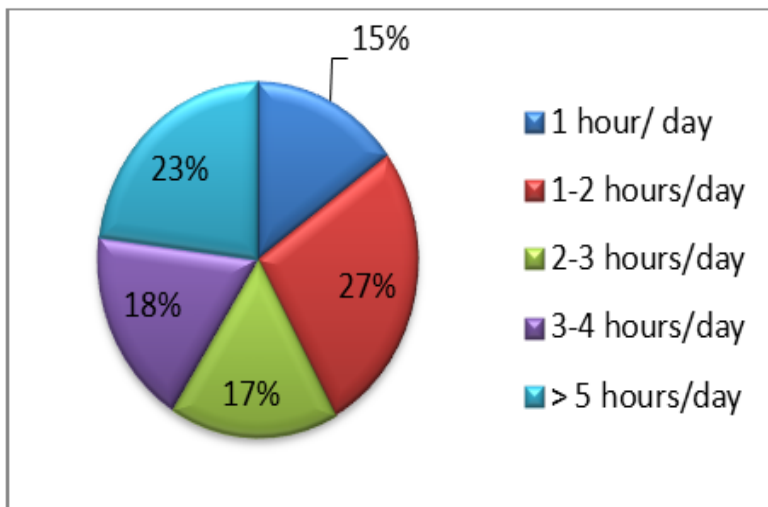


More recently, the cadres access the internet via smartphones (77.4%, high category), laptops (60.2%, moderate category), cellular phones (29%, low category) and computers (9.7%, very

low category). Respondents were able to choose more than two options and the findings are presented in Graph 6 below.

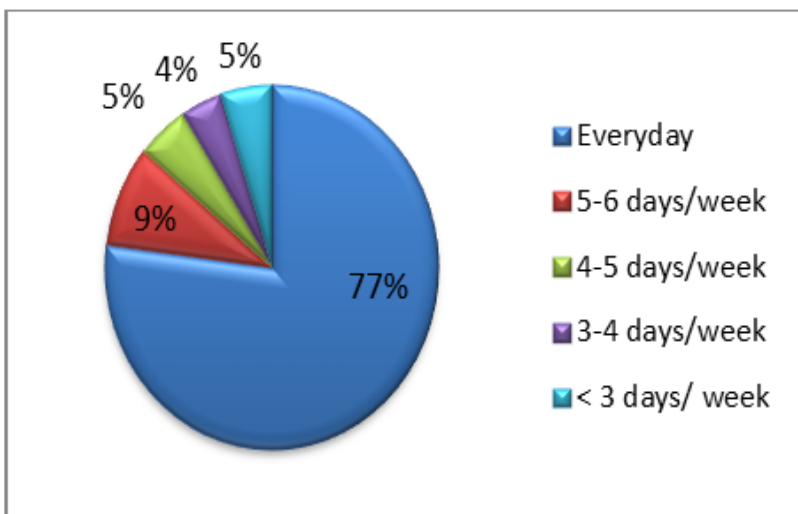
The female cadres access the internet on average 1-2 hours / day and > 5 hours / day (27% and 23%, low category). In contrast, the very low category (below 18%) is the use of the internet for 2-3 hours/day, 3-4 hours/day and 1 hour/day as shown in Graph 6 below.

Graph 6. Average Duration of Internet Access per Day



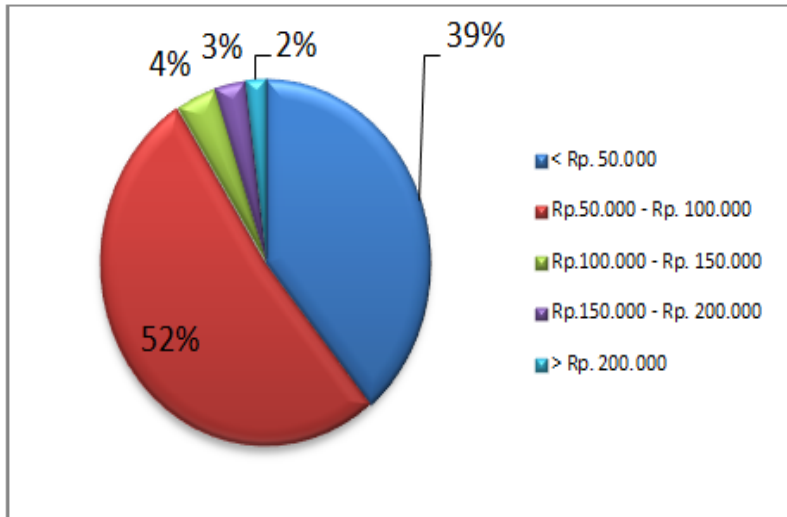
The female cadres access the internet averagely every day (77%, very high category), and the very low category (below 9%) is 5-6 days/week, 3-4 days/week, and <3 days/week as provided in the following Graph 7.

Graph 7. Average Duration of Internet Access per Week



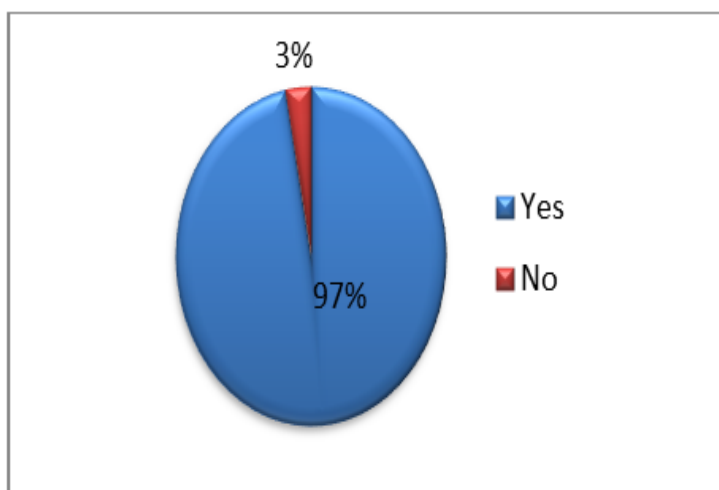
The average costs spent to access the internet ranges from Rp50,000-Rp100.000 (52%, moderate category), <Rp50,000 (39%, low category), Rp100,000 – Rp150,000, Rp150,000-Rp200,000, and >Rp200,000 (<4%, very low category) as show in Graph 8 below.

Graph 8. Average Costs Spent to Access the Internet / Month



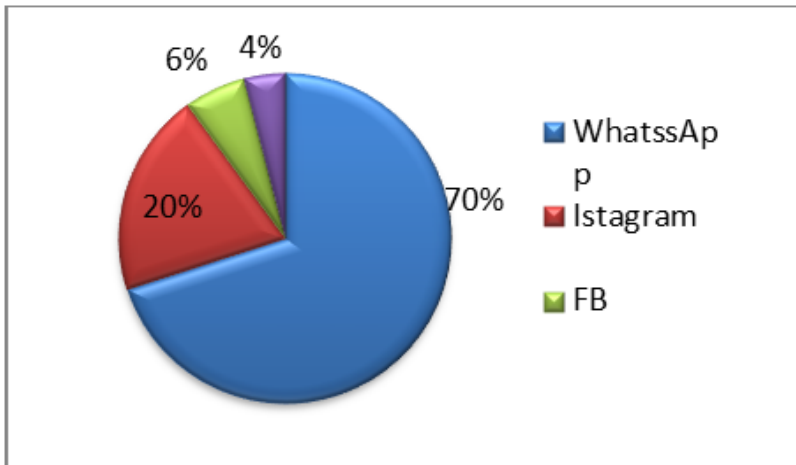
The internet facilities used by the cadres are varied, depending on their personal needs. However, they can choose more than one option. They access the internet to support their jobs (95%, very high category) and to play games or have fun (18.9%, very low category) as presented in Graph 9 below. Using social media, according to the cadres, are very helpful on daily basis by which 97% (very high category) use social media and 3% (very low category) are on the opposite and this is presented in the following Graph 9.

Graph 9. The Use of Social Media



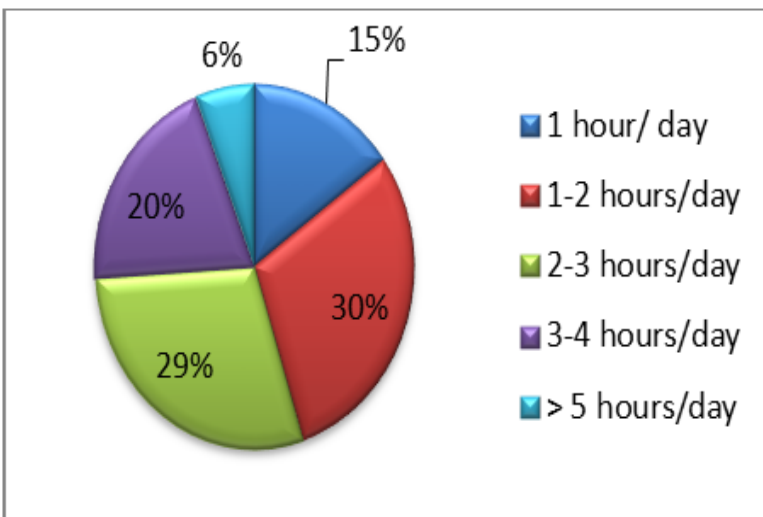
Female cadres in rural areas mostly utilize WhatsApp (70%, high category), followed by Instagram (20%, low category), Facebook and other social media (6% and 4%, very low category), as shown in graph 10 below.

Graph 10. The Used Social Media



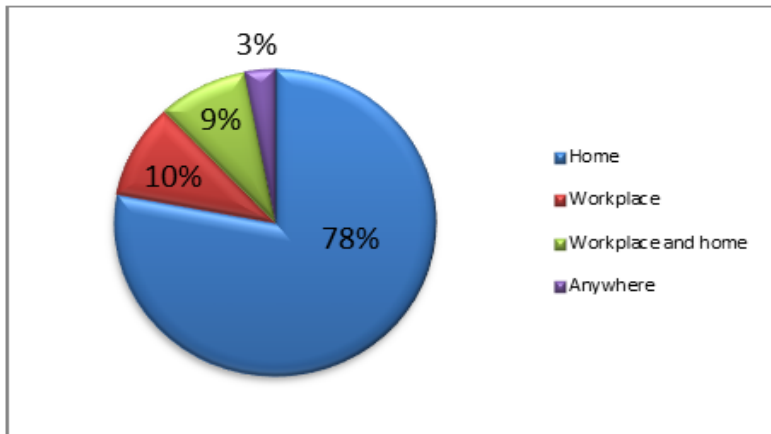
The female cadres use social media averagely 1-2 hours/day, 2-3 hours/day, and 3-4 hours/day (30%, 29%, and 20% with low category). The very low category (15%), meanwhile, is >1 hour/day and >5 hours/day of social media use as presented in Graph 11.

Graph 11. Duration of Using Social Media



In terms of time, the female cadres access social media in the evening (71.7%, high category), at noon (54.3%, moderate category) and in the afternoon and the morning (38% and 26%, low category). In terms of place, women in rural areas access social media at home (78%, high category), at the workplace, at the workplace and home and anywhere (10%, 9%, 3% with very low category) as presented in Graph 12 below.

Graph 12. Place of Using Social Media



Discussion

Digital literacy skill is not only defined by education background but also by the environment. The majority of women who act as the cadres of community empowerment in rural areas only graduate from Senior High School as the highest education level. Nevertheless, their digital literacy skill is improved by getting involved in organizations, although they need more time to adapt to digital technology at first because they are digital immigrants. Smartphone was the first medium that introduced digitalization and internet to the women. They experience more changes when all information and interaction can be easily accessed and carried out. This generation is quite worried about new, touch-screen devices used in various activities; yet, it is normal for digital immigrants to have such a feeling. Castilla et al. (2018) in their study state that digital immigrants prefer a navigation method in the form of a touch screen, although they feel worried about damage to the device. Nonetheless, continuous use of the system is able to improve users' perception of their own feelings about their relative digital literacy.

In terms of searching for information, the cadres use the internet or search engine, e.g., Google via smartphones. It is in line with Hargittai (2005) arguing that the search engine is rapidly growing, including its content and access easiness, becoming a navigation tool for billions of sets of content. Digitalization plays an important role to support the cadres' work to be more efficient as well as making it easier for them to interact with other people. The above survey result indicate that digital technology has enhanced the literacy skill (reading and writing) of the women as the cadres of community empowerment in rural areas. The comprehension of ideas no longer needs a face-to-face meeting, it can be accessed without any limits whatsoever. This condition is affected by the Industrial Revolution 4.0 that has changed the life of social and cultural community, particularly the changes in paradigm and cultural behavior in the communication with digital media (Kurihara, 2016; Astuti, 2018).

A study conducted by Imran (2010) also indicates that age, job, level of education, participation in computer course and cosmopolitanism are the factors contributing to the ICT literacy level of rural communities. However, the ICT literacy level is not only viewed from those earlier mentioned factors but also a learning environment that can develop their literacy skills. This study signifies that the learning environment comes from their communication and self-openness that demand them to try innovation (technology). Women who are actively involved in organizations achieve better digital literacy skills than those who are not.

Digital access is considered significant and affects daily activities. Concerning the idea of basic needs, income is specifically allocated to the internet and social media, by which the budget of averagely Rp50,000-Rp100,000 is spent on average. This implies that lifestyle changes have occurred because digital interests serve as both paradigm and behavior (Astuti, 2018), (Susana, 2012). The female cadres usually utilize the internet for about 1-2 hours/day to support their jobs so it does not distract their activities. The awareness of browsing is also determined by the curiosity of new things (Oxford, 2012). Opinions and information can be carefully learned and understood without face-to-face meeting, meaning that the cadres' literacy skill have been developed (Colin Lankshear and Michele Knobel, 2008).

Literacy should have be instilled in culture to result in an ability for a community to compete in the current digital era. One's competence to read, to understand and to analyze information is a must to recognize and develop potentials as an effort to improve self-quality. (Wahyudin & Purnomo, 2019). Each individual has a varied e-literacy maturity model. Indrajit (n.d.) presents a theory of Personal Capability Maturity Model (P-CMM) by dividing different levels of one's e-literacy, as follows.

1. Level 0 - one does not know and does not care about the importance of information and technology for his/her daily life;
2. Level 1 - one has had experiences where information serves as a vital component for desires achievement and problems solving, and has involved ICT in looking for it;
3. Level 2 - one has always used ICT to support his/her daily activities and has had a continuous pattern in its utilization;
4. Level 3 - one has had mastery and comprehension standard towards information or technology s/he needs, and consistently utilizes the standard as a reference for performing daily activities;
5. Level 4 - one has been able to improve significantly (claimed quantitatively) his/her performances in doing daily activities by using IT; and
6. Level 5 - one has considered IT part of his/her daily activities, and IT has directly or indirectly colors his/her behavior and culture.



The younger generation should have reached Level 5 of e-literacy, however, in reality, this is far from the truth. One of the threats for developing countries like Indonesia is that in terms of competitive markets, globalization is the phenomenon of the digital divide, i.e., a gap between those who can access the internet through information technology infrastructure and those who cannot (Hayslett-Keck, 2001).

Conclusions

Digital literacy skills of women in rural areas are realized due to the influence of the environment, education background, experiences, social status and learning community. Learning community is not merely about having a room and a teacher; rather, the community can be developed through an effective communication network. Although these women are categorized as digital immigrants they can still better their digital literacy skill (reading and writing) by continuously learning and communicating with others; even smartphones can function as the learning resources. The women as the cadres of community empowerment are raised from a learning community formed by the tenet “from, by, and for the community”. Democracy is the basis of the realization of a needs-based learning community that places the people as the subject, not only the object, of the empowerment program.

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