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ASSESSING INFORMATION AND COMMUNICATION TECHNOLOGY IN BUILDING BLUE SOCIAL CAPITAL FOR MARITIME COMMUNITY DEVELOPMENT

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Abstract: The purpose of this study is to assess the use of information and communication technology (ICT) in the development of maritime communities and to build the concept of blue social capital. Blue social capital comprises a social network, social trust and development resilience that take place in the Internet. As individuals constantly accept ICT changes, it helps them to obtain information easily as well as increase their social capital. However, there are still a handful of maritime communities who do not know that the blue social capital may help promote their well-being and present them with the benefits of development. Lack of exposure in ICT is one of the reasons that some people do not understand the potential of blue social capital. The problem of cybercrime and poverty will also occur if the maritime community members are not trained to use ICT. This study uses a systematic literature review to examine the relationship between ICT and building of blue social capital towards maritime community development. The literature review analyses arguments between social capital components and ICT. An expected result is a positive relationship between ICT and blue social capital in the context of maritime community development. Future research should focus on blue social capital community empowerment in urban areas.

Keywords: ICT, blue social capital, maritime community development, social trust, social networking, community resilience

Introduction

The evolution of Information and Communication Technology (ICT) has a potential to develop blue social capital in maritime communities. A good blue social capital involves human interaction, social activities and reciprocal relations, as well as having a sense of understanding for each other in a community. ICT provides opportunities for community members to enhance their benefits of life in various fields, such as health, economy, education and social status (Kalu, 2017). The benefits may be reaped by all communities regardless of geographical limits.

Maritime areas are defined as coastal zones that are five km from the confluence of land and sea (Zulfikri, Yohan & Haris, 2013). Generally, maritime communities are groups of people living in coastal areas who are involved in sea activities to earn a living or otherwise (Puteh & Mamat, 2015). Kelantan, Terengganu and Pahang are east coast states of Peninsular Malaysia that have many maritime communities with their own culture, traditions and way of life.

Maritime communities are categorized as rural residents, which are less exposed to the digital progress compared to their urban counterparts. However, ICT may

help these communities to increase their social capital resilience and individual productivity. It also provides a flexible social space and offers unlimited information to every layer of society. People may express their opinion or give their ideas on social media. The communities should be taught to use ICT properly to avoid falling victim to cybercrime. In line with the concept of the United Nations' Sustainable Development Goals (SDG) 2030, using ICT may encourage the maritime communities to promote themselves in development trends that produce competitive clusters. The blue social capital concept helps maritime communities understand how the relationship process in social networks can work well without the need for face-to-face interactions (Vaithilingam *et al*., 2019).

Although, blue social capital may raise the maritime communities' quality of life, there are still some people who are not willing to accept technological advances (Ramli, 2019). The poor members of the maritime community are often neglected, which makes them feel isolated from mainstream society. Their conservative personalities make them less receptive to the idea of blue social capital in networking. Those who lack knowledge in ICT still believe that traditional ways are capable of solving their daily problems. This problem has weakened the blue social capital of the maritime community, as well as causing them to be left behind in terms of technology.

Literature Review

Blue Social Capital Concept

Blue social capital relates to developing human relations to achieve a common interest. Social networks and beliefs; community resilience and civic engagement are key concepts of social capital for the maritime community. Social networking is a system where communities can connect with each other by simply registering on mobile applications (Nava *et al*., 2010), such as WhatsApp, Facebook and Instagram. Although social networks are popular platforms, especially among the younger generation, there are certain segments of society which have been left behind in the use of social tools. The main reason for this is poor internet access due to lack of infrastructure in rural areas (Berita Awani, 2020). This reduces the value of social capital awareness and members of the community are unable to build relationships, which may affect the positive value of the local economy.

Issues of social trust often occur in maritime communities even though ICT offers social networking support tools (Donath, 2007; in Mustafa, 2018). This includes the dissemination of fake news without realizing the harm it brings to society (Asyikin, 2019). The problem puts pressure on individuals who are less knowledgeable in ICT, especially the elderly. Therefore, they will avoid engaging in online activities. This observation is supported by the Edelman Trust Barometer 2016 study conducted by the International Communications Consulting Company, which stated that only 46 per cent of Malaysians were found to have in trust online news (Berita Harian, 2016).

Although engaging in online activities has become part and parcel of everyday life, the maritime community should also be aware that weak resilience may not bring them sustainable development. As stated in the SDG 2030, sustainable development should be able to improve the economic status of maritime communities (Sa'at *et al*., 2013), yet their community is still left behind compared to others. The reason is that rural communities are usually ignored

and unable to have a say in many matters, like public services, maintenance and livelihoods. Therefore, those in charge of their development as inadvertently overlooked many important things. Feelings of neglect have risen in the communities and their resilience in development will not be strong (Prayitno, 2012).

Conservative maritime communities may consider the use of ICT as a bad influence, hence hindering blue social capital development from taking place (Sa'at, 2011). Conservatism not only occurs among the elderly, but may also be shared by youngsters who are isolated from developments. Youngsters are the most productive group in social networks (Dwiningrum, 2017) and they should take the opportunity to hone their skills and use their potential to stand out in the social media space to build good relations in the e-community. Communities that have good purpose values in ICT are able to adapt and build trust in their social life (Yusoff, 2015). However, the "oriental attitude" of maritime communities still breeds a complete distrust of ICT, leading to low civic engagement in the digital space (Amir Za, 2016).

With the lack of civic involvement in e-communities, maritime communities cannot solve their problems well and quickly (Nadia, 2017). For example, an individual who doesn't use social networking will have no one close by to reach out to as quickly as possible when he needs help. Factors of low civic involvement in maritime communities may also affect other social systems. A high civic engagement opens up opportunities for maritime communities to promote their local economic development (Ryan, 2017).

Social Capital Theory

Generally, social capital is the bond of human relations that exists for the purpose of achieving common goals. "Social capital is the two-way relationship of human beings in a social group with multiple purposes" (Bourdieu, 1979). Social capital in ICT helps maritime communities improve their education, health and economic systems. The social capital theory allows the community to understand the steps that need to be taken in utilizing the benefits of ICT to develop good relationships when online. Social capital theory is used to see how the impact of ICT brings sustainability in the lives of maritime communities. Thus, social capital theory has three concepts that can be used in social networks, namely, a sense of belonging, a sense of trust in the community and community involvement in social networks (Alfandya, 2020).

According to (Gittell *et al.,* 2010), social capital helps maritime communities strengthen work skills, increase their resilience and create a favorable environment. Good use of ICT, such as creating activities or having discussions together will allow the community to give and receive views from different angles. Even though they have different backgrounds online, an attitude of responsibility may evoke a sense of belonging to each other. This means, social capital in ICT will not only facilitate daily activities (Mahbob *et al.*, 2017), but also foster cooperation and trust in society.

Next, understanding the theory of social capital in ICT encourages maritime communities to engage each other online. Humans can also build online communities and do the same activities as in the real

world. For example, maritime communities may carry out social activities as well as collaborate with other outside communities to improve their well-being (Fuchs in Nasrullah, 2015). The idea of social capital is triggered when maritime communities value their well-being through education, health, economy, social, income and political activities (Josep, 2011).

Key Literature on ICT and Blue Social Capital

Today, ICT is very important in human life. Almost the entire population of the world uses digital space to communicate and find information. The development of technology has also created the convenience of social networking without limits, ultimately changing the pattern of social capital of society (Aidil, 2018). Blue social capital is defined as a two-way relationship in developing maritime communities that contributes to achieving common goals. The digital space plays a role in changing the lifestyle of maritime communities, especially their source of survival. In essence, such success can build the blue social capital of the community as an action plan of SDG 2030 (Ahmed, 2018). SDG 2030 emphasizes the sustainability of society through the utilization of ICT, so that the social capital of society may enhanced.

Researchers have identified ten analytical instruments in the context of ICT-building of "blue" social capital in maritime community development. The analysis is summarized in Table 1.

Table 1: Key literature search for information and communication technology in building blue social capital for maritime community development

No.	Research	Background	Gaps/Discussion	Method	Findings
1.	Gron & Svendsen (2013) *"Blue" Social Capital and Work Performance: Anthropological Fieldwork among Crew Members at Four Danish International Ships.*	The practices of blue social capital are applied in organisations.	Analyzing the improvements of work quality by using technological materials in the organization that applies the value of social capital. This research uses concepts of bonding, bridging and linking in analyzing the quality of workers.	Descriptive observation	Blue social capital should be applied to develop relationship in teams, not individuals. Thus, it can control the relationship in a large organization and create an atmosphere of "*trust*" between employees and management. They also can improve the quality of work and help each other.
2.	Sulistiyono (2014) *Mengenal Sistem Pengetahuan, Teknologi, dan Ekonomi Nelayan Pantai Utara Jawa.*	Lack of exposure to the benefits of ICT in the maritime community.	The study found that the maritime community in the north coast of Jawa have limited economic activities because of slow technological development.	Descriptive observation	Factors of ICT development moving slowly: a) Problems of internet access in rural areas. b) The characteristics of maritime communities that rarely accept ICT facilities. c) Disclosure on the benefits of ICT is lacking.
3.	Ilham and Salleh (2015) *Isu Privasi dan Keselamatan dalam Kalangan Pengguna Aplikasi Media Sosial*	Lack of awareness about social capital causes of consumer safety in social media to be compromised.	Identifying aspects of user privacy and security when using social networks. The study also observed the characteristics of ICT that control information resources and experiences in social networking platforms.	Descriptive observation	Teenagers are more likely to use social media. They are more open than the elderly, so they care less about privacy and personal safety. Obsession with social media causes the social capital of consumers to be affected, such as relationships between communities will not be good with less trust. The issue of online safety causes the elderly to shy away from the e-community space.

No.	Author / Title		Objective	Method	Description
4.	Prasanti (2016) *Perubahan Media Komunikasi dalam Pola Komunikasi Keluarga di Era Digital.*	Technological advances provide convenience to consumers and change the form of human social capital.	Analyzing the issue of changing communication patterns in technology through family organizations.	Descriptive observation	Information and communication technology advance are changing the way aspects of human life, communities are now more comfortable communicating in social networks. The public can now surf the internet anywhere regardless of the time and it also contributes knowledge to the users.
5.	Mustafa (2016) *Penggunaan Laman Sosial dan Impaknya Terhadap Hubungan Persahabatan dalam Talian*	Social networks allow people to build e-community relationships.	Studies have found that social networks have pros and cons. The importance is communities can build social capital through relationships with other communities and develop knowledge.	Data analysis	Social sites help community development to become an intermediary in interactions so that the activity is almost similar to real-world scenarios. Nowadays, communities are often online and this makes them more comfortable not socializing in the real-world. This will put pressure on individuals who are less involved in the internet space.
6.	Malik and Dwiningrum (2017) *Modal Sosial dan Media Sosial pada Masyarakat Cyber di Desa Melung, Kabupaten Banyumas*	Social media contributes to the social capital of the online community.	Social capital is capable of producing productive societies and strengthening civic involvement in community development.	Descriptive observation	Activities in networks will generally be done on the individual's own initiative, whether voluntarily or not. However, social capital plays a role in shaping human life in social networks. For example: a) Social networks may help communities to seek help far and wide; b) Social media helps increase cooperation between local communities; and, c) Communities feel valued when they solve problems together even online (e-community).

No.	Author (Year) / Title	Finding	Context	Method	Discussion
7.	Ibrahim and Chik (2019) *Tahap Modal Sosial di Kalangan Nelayan Kuala Perlis: Satu Kajian Rintis*	The educational background of a community contributes to the value of the rupture of social capital in ICT.	The study showed that the majority of respondents did not have high level of education, and only a minority had Malaysia certification of higher education, a bachelor's degree and masters.	Data analysis	Persistent poverty in maritime communities prevents them from enjoying the benefits of technological developments and results in the rupture of social capital. At the same time, it limits their educational opportunities and presents them with few opportunities in using ICT.
8.	Bakkera et al. (2019) *Resilience and social capital: The engagement of fsheries communities in marine spatial planning*	Social capital factors in maritime communities may strengthen community resilience	The importance of bonding, bridging and linking in guiding social capital in communities is examined.	Descriptive observation	Social capital can produce community resilience, as well as a productive and creative mentality. Maritime communities should plan for the stability of e-community participation, so that they are more open and accepting of the views from other communities.
9.	Hamzah et al. (2020) *Impact of Spreading False News through Social Media on The Community: A Case Study of Universiti Tun Hussein Onn Malaysia Students.*	The development of technological progress cannot control the actions of society as well as the awareness of social capital is lacking.	Social media is abused by a handful of individuals purely for self-gratification. The spread of fake news causes people to lack confidence and be afraid to stand out in the internet space.	Data analysis	Because of fake news, some people have a fear of using social networks. Some individuals in the maritime community feel that the internet space does not provide social capital benefits, whereas all activities can be done in the real-world. The issue of spreading fake news has become more prevalent, making some people uncomfortable when posting on social networks.
10.	Alfandya and Wahid (2020) *Peran Modal Sosial dalam Keberhasilan Inisiatif Teknologi Informasi dan Komunikasi untuk Pembangunan*	Relationships are formed when ICT impacts human social capital.	This study was conducted in Yogyakarta, Indonesia, and was not specific to a community. Social capital in social networks exists when there is a value of trust and voluntary involvement.	Descriptive observation	Social capital is a resource of community resilience in social networks, besides influencing every individual action. The theory of social capital in social networks influences 8 factors: a) A sense of belonging b) Social networks c) Feelings of trust and security d) Different actions e) Reciprocity f) The value of community living norms g) Community strength h) Community involvement

Source: Authors

Methodology

Research Design

This study uses a systematic literature review approach. The search for systematic literature solution methods was oriented towards assessing ICT in building blue social capital for maritime community development. The search focuses on instruments of blue social concept, such as social networks, social beliefs, civic engagement and community efforts. The review also includes theory applications in other countries, and issues and problems faced by the maritime community. Relevant secondary data from government official websites, publications, reports and national data sets have been reviewed and thematically analyzed.

This research is based on previous studies and maritime communities deploying document analysis approach using secondary data. The data were analyzed using ten analytical instruments based on concepts and constructs of ICT and blue social capital. The analysis is summarized as in Table 1.

Search Strategies

Literature search was performed using two term-specific languages, namely Bahasa Melayu and English, such as *modal sosial*, *kepercayaan sosial*, *rangkaian sosial*, *bahan digital*, *teknologi informasi dan komunikasi* and *komuniti pesisir*. In English, they were social capital, social beliefs, social networks, digital materials, information and communication technology and coastal communities. The search included materials and publications from 2014 to 2020. The database used in this study was Scopus, Google Scholar and the web database of public universities in Malaysia.

Results and Discussion

Results Analysis

There is no doubt that ICT is a platform for communities to communicate, build relationships share opinion and carry out activities that improve their well-being. However, not all individuals are able to utilize ICT in building their social capital, especially those living in rural or coastal areas (Puteh & Mamat, 2015). Previous studies had found that a small number only of maritime community members had good educational background. The limited education causes them to lag behind in ICT development (Sara, 2021). The low educational background of the community also contributes to the rupture of social capital values (Sharifah & Norlaila, 2019). Some individuals still did not understand the potential of blue social capital that could be created even in social networks. Due to their ignorance, members of the community would become prejudiced towards ICT and assume that its development would always bring bad influence.

According to Gron and Svendsen (2013), the concept of blue social capital should be applied in a group of people or community, and not individually. Besides, the element of trust in social capital could improve the quality of maritime community engagement and development. Problems of poor internet access in rural areas and the cold reception of maritime communities towards ICT would cause them to become left out from mainstream development. Lack of awareness of social capital may compromise consumer safety in social media (Singgih, 2014; Madiha & Azul, 2015).

Poverty in maritime communities had not been eradicated despite the existence of elite groups among them. Based on

the analysis made, communities living in rural areas often experienced poor internet access (Harian Online, 2020). This reduces their involvement in social networks besides causing a rift in social capital within their group. This observation was supported by statistics from the Malaysian Communications and Multimedia Commission (MCMC) in 2020, in which the number of internet users in rural areas had decreased by 5.6 per cent since 2019. If such problem persists without solution, the community's resilience in sustainable development will face a setback and negative mentalities will be difficult to change.

Social capital cracks occur in maritime communities when members become obsessed with social media. Social media should be the main platform for our society to develop skills and stand out in beneficial activities. The Fisheries Development Authority of Malaysia (LKIM) chairman Datuk Syed Abu Hussin Hafiz supported the use of ICT to maintain community civic engagement and resilience in line with SDG 2030. However, the development of ICT had caused some maritime communities to be complacent in social network safety, such as privacy and identity theft. This problem would result in a sense "fear of ICT", especially in individuals who were less skilled in using the technology. "Trust" could not be built overnight even among family members.

Conclusion

Social capital had reciprocal influence on ICT in the development of maritime communities. Its network had three important aspects, which were bonding, bridging and linking to guide and influence maritime community members to use ICT effectively. Social capital in social networks also exists when the community values trust, civic engagement, social networking, a sense of belonging and responsibility. The utilization of ICT in maritime communities was still lacking. The main hindering factors were poor internet access due to remote location and poverty that made them unable to afford equipment such as computers and handphones. Therefore, the responsible parties must play a role in shaping and increasing the social capital of the communities in ICT so that the group would not be left behind in modernization. Maritime communities had contributed a lot to the nation's economy, but they rarely reap the benefits of progress. The application of social capital in networks must be implemented so that it may be able to create a sustainable society according to the action plans of SDG 2030.

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Notes on Contributors

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