Experts Collaboration: Improving Information Services for Maritime Community in Indonesia

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Abstract
Coastal areas and small islands in Indonesia have many natural resources. People in these areas need some information about how to process marine products such as fish and squid into salable commodities. They also need to be inform how to protect the environment therefore the source of clean water will remain intact. Some of them are illiterate. It needs a strategy in providing information services for them.
The paper proposes collaboration among experts in order to provide proper information, packaging and communication channel. A team of experts consists of content development group (CDG), communication channel and information repackaging development group (CIG) and socio culture group (SCG). In the case of this paper CDG consists experts of marine resources management, appropriate technology for rural, and freshwater technology. CDG will identify and propose the content of information needed by the community. Meanwhile CIG consists experts of library and information sciences, which identify and propose effective communication channel and appropriate packaging of information. Then SCG consists experts of rural socio culture, whom identify socio culture of the user target that affecting the dissemination of information.
The collaboration among experts assumed will provide information with appropriate content, communication channel and packaging. The concept would improve the level of information literacy of people in coastal and small islands. In the future the concept will be analyzed empirically.

Keywords: Coastal communities, Information literacy, Information needs, Information repackaging, Small islands communities.

Introduction

Indonesia is an archipelago located on Southeast Asia. Indonesia has 17,504 islands with a coastline of 81,000 km, the second longest in the world after Canada. 65% of the total population live in coastal areas and depend on marine resources. People in this region in general has a low economic level, with the number of poverty is 70% of the total poor population in Indonesia (Dahuri et al., 2001; Dahuri, 2009; BPS, 2014).

Most people in coastal and small-island have low level of information literacy. Some adult are illiterate. Even though some of them are able to read and write, they have difficulty in understanding written information. This is because of low level of education (Yoganingrum et al, 2015). Basically level of information literacy is associated with a capacity to read and understand written material. Maryati and Yoganingrum (2015) suggested a business processes to package information and created new forms of information packaging for people, whom has difficulty in understanding written information.

Based on the references study conducted by Uzuegbu (2016), an effective models for rural information delivery is still questioned, especially for across Sub-Saharan Africa. Meanwhile the study of Rahman and Bhuiyan (2016) showed that the information content provided by the Multipurpose Community Telecenters in Bangladesh have not met the information needs of the indigenous tribal communities and was lack of update mechanism. Information on technology includes clean water processing need to be disseminated to reach out wider maritime society. Information dissemination requires a strong network with the partnership between researcher, information provider, and the user of information (Virji et al, 2012; Van Aalsta et al, 2008). The research result must be presented in accordance with the user characteristic. Therefore researchers should be cooperated with the institution of information services (Tribbia and Moser, 2008). Collaboration in information services mostly is conducted by academic libraries, which focus in providing wider collection (van den Hoogen and Parrott, 2012) or understanding the need and characteristic of their students (Tenofsky, 2007). However a strategy in disseminating information for community, who has limitations on reading and writing has not heeded.

This paper suggested the collaboration among experts for effective information services for the coastal and small island communities. The group of expert is content development group (CDG), whom identify and propose the information provided for the community; communication channel and information repackaging development group (CIG), whom identify and propose effective communication channel and appropriate information packaging for the user target; social and cultural groups (SCG), which identifies a culture that influence the selection of technology and media communication. The research question is 1) why collaboration between the expert is needed? 2) How is the form of the collaboration?

Theoretical background

Collaboration in information services

Several libraries generally do collaboration on information services including sharing of collection (*interloan library)*, communication between the member of different library (Minami, 2008), and one membership for many libraries (van den Hoogen and Parrott, 2012). In academic library, Tenofsky (2007) discusses the collaboration between library and student service section to explore the needs and characteristic of the student. Sanborn (2005) proposes the collaboration between faculty and library to increase the research ability of the student. Uhegbu (2011) stated that private sector participation in librarianship would provide funds to acquire new facilities, maintain existing ones, develop infrastructure and equip libraries and resource centres. Ullah (2015) recommend the collaboration among the various professional organizations to improve professionalism in the field of library and information science through training and workshops.

Collaboration of information services increase mitigation and adaptation of people to the impact of the climate change. Malone et al., (2010) recommend providing the routine and continuous data to increase adaptation and management of risk caused by the climate change. Provision of data and information is the main goal to integrate, repair and build the monitoring and modeling of capabilities.

Most researchers present the results of their research in the form of scientific papers that are difficult to be understood by the community. This is due to the lack of cooperation between researchers and information services (Tribbia and Moser, 2008). Actually, people can use the results of research. However, researchers have difficulty in conveying the results to the public. It occurs in many disaster and vulnerability related research.

Previous researches showed that the collaboration is an important tool for forecasting of socio-political conditions (Miller, Forlines, & Irvine, 2013). Collaboration between information services and any social media is required (Foster, 2012). It is based on the survey that many people use social media to share information and communicate. The use of social media in the information services will reach many people.

Center for Scientific Documentation and Information - Indonesian Institute of Sciences (PDII LIPI) collaborate with experts developing packaging of information on fresh water management technology since 2009. The information is primarily intended to coastal and small island community. The technology is presented in the actual shape and size, 3D animation movie and poster (Yoganingrum et al, 2015). The collaboration between PDII - LIPI and experts also produce a policy brief for policy makers. The experts propose critical topics regarding maritime issues in Indonesia through a focused discussion.

Successful example of collaboration between the information services and research institution is between Cancer Information Service (CIS) and Cancer Information Service Research Consortium (CISRC) in 1993. The shape of collaboration is sharing of risks, responsibilities, and benefits to increase the success of each program (Fleisher L, 1998).

Characteristics of the community

People in coastal villages have problems in accessing education, science and technology (Safril and Marzuki, 2014). It influences their livelihoods. Based on Figure 1, their income relies on sector of food crops (38%), agriculture (30%), fisheries (18%) and aquaculture (3%). While the economic opportunities associated with the processing industry was only 1%.

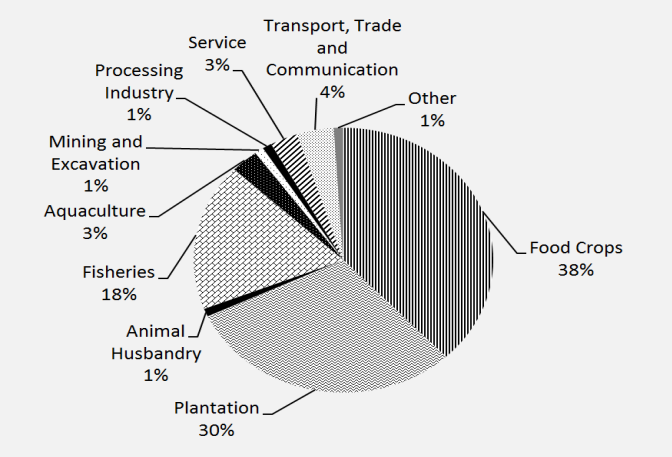

Figure 1. The main livelihood of the coastal population
(Source: BPS, 2014)

Kusnadi (2010) showed that most economic activities in coastal area are involving women, therefore in some areas women become "the ruler of the coastal economic activities". Meanwhile coastal community has several characteristics, which becomes social capitals. Among others are work hard, appreciate to achievement and expertise, open mind and expressive, strong social solidarity, high adaptability and survival, tend to be consumptive, religious, and temperamental especially relating to self-esteem. Hadi (2008) argued that most community empowerment program focus on institutional policies rather than value and characteristics of community.

Program, Activities, and Evaluation

The study of the programs in coastal area showed that content and media (channel and mechanism) for transferring information, knowledge and skill become obstacles. Amanah (2010) stated that appropriate media communication should be participatory, dialogic, and motivated. Main information resources of people in rural are public figure, organization, instructor, radio and television. Meanwhile others have not widely employed (Murti dan Perbawaningsih, 2014).

Regulation of the Minister of Maritime Affairs and Fisheries, Republic of Indonesia *No. 40/PERMEN-KP/2014* stated that empowerment program of coastal and small island community should provide the information relating to facilities for production, prices of commodity, forecasting of climate, education, training, and counseling for market access and partnership opportunities (*Kementerian Kelautan dan Perikanan* RI, 2014).

Currently the media widely used for information providing is Internet. Other information system is fisheries aplication system, Global Positioning System (GPS) or

Vessel Monitoring System (VMS) (Sirait, 2014). According to Chen and Liu (2011) people with low level of income and education has obstacle in accessing information via Internet. Therefore traditional system of communication is still needed to complement the modern one (Adjaye, 2008).

Coastal community needs information services to increase income as well as preserve the environment. The information should be based on evidence such as the result of research and the information from the expert (Cossarini et al., 2014). The empowerment program should provide, select, and determine the information needed by involving the stakeholders, expert, and also using the scientific data and result of field monitoring (Vugteveen et al., 2014). Library and librarian, information provider, and researcher in the field of information sciences should take an important role by processing the scientific information to be useful information for government, area manager, and the community such as farmer and fisherman (Wells, 2014).

Research methodology

This study employed desk references to develop the concept of collaboration of experts in information services. A number of previous studies proved natural conditions, the target user characteristics, the failure of empowerment programs as well as inappropriate content and communication channels on information services led to the required collaboration of experts in information services.

The paper raised the case of dissemination of information on water management and appropriate technology for small island communities. Water wells in coastal and small island easily become brackish, because seawater intrusion. In addition, human activity is more for the exploration instead of conservation therefore can accelerate and exacerbate environmental damage.

Most people living in coastal and small-island have livelihood as a fisherman. They produce dried fishes, squids and others as a source of income. It was done especially when they get a lot of catches. In the rainy season, they are difficult to dry fishes and squids. In addition they are still using traditional packaging process.

Result and discussion

The benefit of cooperation of experts in information services for coastal and small island communities

The collaboration experts should be conducted in disseminating information for community, because of some basis. The researchers should collaborate with the information services to convey the research result in appropriate manner. (BPS, 2014) identified that the program, which running without collaboration with experts on information management faced the obstacles in conveying the information to the community. The people with different kind of job, education, income and age need difference content and media communication (Yoganingrum, 2014). The dissemination of information will be more effective by using information channel chosen by user. As an example they do choose modern or traditional, oral or written of information channel (Bosompra, 1989; Adjaye, 2008; Nyana, 2009). Providing access to the library by the Internet become a requirement (Cherry et al., 2002), however it was inaccessible for user with low level of income and education in rural

(Chen et al, 2011). The traditional communication systems need to be maintained and used as a complement to modern system. Information for rural communities should be presented in simple, in order to easy to be understood, and through the media widely owned and chosen by the community.

The researchers have produced the research results such as simple technologies for rural, empowerment strategy of rural community, environmental protection, health and so on. Tribbia and Moser (2008) argued that people couldn't understand most of those research results since they are served in the form of scientific articles. Information services must package and deliver research results according to the characteristics of the target users, even illiterate communities can access and use with ease (Maryati and Yoganingrum, 2015).

Cooperation among experts in information service has several benefits for the information providers, users, and even for the experts themselves. The information provider can present information that is accurate, current, and valid (already proven through scientific research). The users will get the most benefit from the information services based on cooperation with these experts. The benefits are ease in adopting new technologies, information obtained in accordance with their needs, and presenting information in accordance with their characteristics. The benefits could be gained by designing back and forth communication, so that the experts can carry out an evaluation based on feedback conveyed by the users. The feedbacks from the users also input for certain expertise development.

The forms of expert collaboration in information services for coastal and small-island communities

Based on the case study of this paper we divide experts into three groups, which comprise of content development (CDG), communication channel and information repackaging development (CIG) and socio culture group (SCG). The activities of each group are following:

1. CDG consists of experts on water technology, rural appropriate technology and marine resources economics. They have a responsibility to identify the content of the information to be presented to the users target. Each expert develops a research instrument to explore the problems of user target and identify the need. Based on the problems, the group suggests the kind of economic valuable marine resources and appropriate technology needed to process them as well as the appropriate technology for fresh water management. The suggested kind of marine resources or appropriate technology is already developed in other region, which more or less has the same characteristics with the region target. All suggestions become information content provided for the user target.

   This group should identify the degree of difficulty of the chosen technology to be delivered. The design of the technology should be simple and the material available and obtained easily. Therefore the target user without technical assistance can produce it.

2. CIG consist of experts on library and information sciences. They have to identify the appropriate media based on the characteristics of the user target and effective communication channels to convey the information. Different job, education, income and age of user target, different need of media communication (Yoganingrum, 2014). Meanwhile Spinka and Coleb (2001) argued that the communication channel used should be accordance with the type of information presented. One of aims in disseminating information for people in rural is improving their information literacy (Yoganingrum et al, 2015). Maryati and Yoganingrum (2015) argued that the appropriate information packaging would overcome the problem in information provision for people with low level of information literacy skills. The strategy should be able to make people reaches the highest skill in information literacy in the context of the information needed (UNESCO, 2008). Based on UNESCO (2008) the dissemination of information should consider the three groups of community; firstly they who live in oral tradition, has low level of education and/or be a part of marginalized groups.

3. SCG consist of social and cultural experts. This group helps CDG and CIG by identifying the social and culture of the user target that accelerating and hindering the technology and media delivered. The culture affects the IT acceptance as a media to convey the information (Robin et al, 2014; Al-Gahtania et al, 2007). Identifying the socio-cultural context is critical to the selection of appropriate technology as well as prevention of the waste of human resources and economy (Wicklein, 1998).

Conclusion

This paper proposes collaboration among experts in information services for coastal and small-island communities. The paper raises the case of the information services on economic valuable marine resources, water management and appropriate technology. The collaboration is assumed would gain some benefits such as appropriate content as well as effective communication channels and information packages. It is happened due to the content, communication channels and information repackaging identified and proposed by the experts. The paper divides the experts into three groups, which have responsibilities and functions are related to one another. In the future the effectiveness of the concept will be measured empirically.

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