



Developing Economic Quality of Community through Makerspace Service at Public Library of Gunungkidul Yogyakarta, Indonesia : A Model Approach

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Abstract

A library does not only function as a place to store books and focus on physical development, but also as a community empowerment. The makerspace activities at the library can be an effective approach to the users to create an innovation and shared creation. This is the meaning of shifting library paradigm in a better direction. This research is a type of qualitative study aimed at analyzing the activities of the makerspace in Gunungkidul public library and offers a model for implementing entrepreneurship-based makerspace that can improve the economic quality of the community. Researchers conducted interviews to some informants through purposive sampling, namely the head and librarians in the public library as well as to some members of batik training held by the library. The results show that the activities of the makerspace through this training are able to contribute to make a creative environment and foster entrepreneurial spirit for those members. However, this activity has not contributed significantly to prototyping because the library has not provided enough references as well as adequate information about batik designs and motives which are much on demand by market. Argues that the makerspace activities need to be supported through the help of access to capital, technology, and market because these three things have a significant effect on the success of product sales. Therefore, these three components need to be added in the activities of the makerspace so that the project can improve the economic quality of the community. Also, a model for implementing entrepreneurship-based makerspace activities can be made to achieve the success of the projects undertaken.

Keywords: Entrepreneurship, Economic Quality, Model for Implementing Makerspace, Public Library of Gunungkidul Yogyakarta

1. Background

As stated by Ranganathan (1931) that a library as a growing organism is going to change over time. The views of communities towards libraries as a building have now changed to become an easy and effective place for information access due to their paradigm shift from physical ownership to information access. Not only has this occurred, but also the library has been developed into a place of interpersonal interaction amongst library users that is able to produce a great creativity. The progressivity of library service innovation provides and presents a dynamic space for the community to be able to work through utilizing library facilities.

As a provider of information, the libraries provide broad benefits to the community. Library services are no longer only oriented to the management and development of collections, but also to aspects of its existential correlation with the advancement of socio-economic life of society. In this case, public libraries have become very important institutions. According to Law No. 43 of 2007, public libraries are libraries dedicated to the wider community as lifelong learning tools regardless of age, gender, ethnicity, race, religion, and socio-economic status. This regulation implicitly provides access to improve knowledge-based economy. This means that the higher the knowledge of people, the better their economic condition.

Morris A., et.al (2001) explains that public libraries will be important when they are able to improve literacy, stimulate imagination and insight, empower their communities, and support library users' education at all levels. Furthermore, Lewis, G.L (2004) conveys that there would be a positive relationship between libraries and public if the libraries are able to improve the progressivity of community literacy as well as contribute to increase economic productivity amongst people. This opinion makes clear that the function of the library is no longer only oriented to the fulfillment of information to library users, but also takes part in the empowerment of society through improving the quality of economy and social relation.

One of the developments of library services, which lead to community empowerment, is a makerspace service. The makerspace is a place where people gather to share resources and knowledge, work on projects, and build networks (Educase, 2013). Metropolitan New York Council (2012) explains that the makerspace positions the library as a place of building, inventing and doing instead of a static location of consumption and acquisition. In this case, the makerspace activities will make the library as a place to build innovation and find

creativity, so that the library is no longer a book warehouse but a laboratory of ideas that involve the community. Willet (2015) adds that a makerspace-based learning requires a facilitation and mentoring approach and is no longer using teaching methods but rather that learners will 'do' something more than 'receive' something.

Gunungkidul is one of the regencies in Yogyakarta Special Region (D.I.Y) Indonesia, located in the coastal area. As an area, which is far from urban areas, the people of Gunungkidul regency have limited education and opportunity for improving their economic quality. This makes the coastal community need special attention to improve the quality of their daily life. For this reason, public libraries have a big role in assisting coastal communities of Gunungkidul, particularly providing as much information as possible and empowering them to improve education and economic quality. Thus, there needs a proper model for implementing the makerspace service in order to produce a creative society by which its creativity is able to help improve their economic condition.

2. Research method

This research is a qualitative research with a descriptive approach. Moleong (2007) explains the qualitative research as a study that intends to understand the phenomena, which are experienced by the research subject, for example, behavior, perspectives, motivations, actions, etc. holistically and descriptively in the form of words and language. Meanwhile, Sugiyono (2010) argues that qualitative research is a research method based on natural object condition, in which the researcher becomes the key instrument and emphasizes the meaning of generalization. Descriptive research usually has two purposes, which are to know certain physical development and describe in detail certain social phenomena (Singarimbun, et al., 2008). Based on those points, Sukmadinata (2008) states that descriptive research is aimed to describe a situation with what it is, so that it can be said that qualitative descriptive research is trying to explain in detail and what it is about a particular phenomenon in the form of words or language.

Furthermore, this research uses a purposive sampling technique. According Sugiyono (2009), purposive sampling is a technique of determining the sample with certain considerations. In this research, the informants chosen are the Heads of the library, librarians who know the service of empowering the coastal community of Gunungkidul, and the community who are

involved in the community empowerment program held by the public library. The sources of data were obtained from observation and interview.

3. Results and discussion

3.1 Research Results

1. Makerspace through Batik Training at Public Library of Gunungkidul Yogyakarta

Makerspace is a space where people can gather to share resources and knowledge, work on projects, and build networks (Educase, 2013). Gerstein (2014) says "makerspace is more than a space of its own. It is a mindset that can and should be taught". By adopting the concept of the makerspace at libraries, people can shift from consumptive to productive. The makerspace activities at the library can also be done by providing tools and public spaces, such as community centers facilitated by experts/mentors to help develop knowledge and innovation (Alberta Education, 2011; Fullan 2013; Wagner & Compton, 2012).

The public library of Gunungkidul Yogyakarta provides batik training services to housewives in Gunungkidul Regency. Batik training activities can be said as a makerspace service at the library that uses entrepreneurial model. This is as Travis Good (2013) says that there are three makerspace models that can be done by makerspace activists. The three models include collaboration, centralize, develop and deploy, and entrepreneurial.

This batik training activity has been running since 2014 and more than 50 members have joined. Batik training activity was held starting from the concerns of the local public library of Gunungkidul pertaining to the quality of life amongst Gunungkidul community, especially in terms of economy. The majority of housewives in the region do not have a steady job so that they rely solely on their husbands' incomes even though those income reasonably cannot meet their daily needs. Therefore, the public library took an initiative to provide batik training as an effort to empower the community and increase their economic quality.

2. Makerspace Contribution to Gunungkidul Community

Activities of makerspace at the library are expected to contribute positively to its users. As the makerspace activities conducted by the public library of Gunungkidul through batik training have played important roles amongst library communities. According to Van Holm (2015), when a library implements a makerspace activity, it will provide three forms of contribution, namely, generating entrepreneurship, creative environment, and prototyping. Those contributions are explained as below.

2.1 Growing generating entrepreneurship spirit

The makerspace activities can contribute to develop a variety of innovation of the library users, which are one of them is to build creative ideas of entrepreneurship. The makerspace is to be able to provide a better opportunity for those users to create new products (Mahr and Lievens, 2012).

In this study, researchers see that batik training service conducted by the public library of Gunungkidul is able to grow an entrepreneurial spirit. This can be seen from the success of its activities in attracting housewives who live around the library. There are at least 50 housewives who adept at making batik after following the training. The batik training service is offered at every opening hours of the library service, so that the members of the library can follow the training intensively.

The entrepreneurial spirit built through this batik training is also evident from the members' success in creating batik and selling it to the market. Almost all members who are adept at the batik creation are able to sell their products to consumers. This means that they have additional incomes in order to meet the needs of their family. Therefore, researchers can conclude that the makerspace activities through batik training is capable of encouraging entrepreneurial spirit of the members.

2.2 Creative environment

Amabile's (1983) explains that the creative component consists of three factors including relevant skills, qualified education, and motivation. The makerspace offers an educational model which is able to develop a new skill to library users in order to create a great product. The makerspace is also capable of producing a creative environment through a community network that is able to connect each individual's creative ideas to be developed (Bjork and Magnusson, 2009).

For this point, researchers try to get the picture that the makerspace service through batik training at the public library of Gunungkidul also shows its potential to play important roles as can be seen from cooperation between members in making batik design, which is good and unique. The members of the batik training consisting of dozens of housewives in Gunungkidul have been facilitated with batik studio albeit batik training is often conducted at the library. However, this batik studio is made in order that the members can at times practice batik themselves although the library service hours are closed. Researchers see that the efforts made by the public library of Gunungkidul are able to build a creative environment which is based on the cooperation between members and a very conducive training space. Therefore, it can be concluded that the activities of makerspace through batik training can provide a creative environment for the members.

2.3 Prototyping

Prototyping is an important component that is used to design the way how to take a product into a market. Makerspace is able to help members find the latest designs or issues to develop their products. Through the makerspace activities, the prototype process creates an opportunity for members to get input from other members so that the results obtained will be more potential (Van Holm, 2015).

In this study the researchers argue that the batik training activities provided by Gunungkidul public library have not significantly contributed to the improvement of economic quality of community. Library users who participate in batik training did not have all capabilities to give suggestions and propose related designs and models of batik. This is because not all members of the training have enough books or references about unique and interesting batik

designs. It seems that this situation makes them not able to create batik motives or designs that may attract many people in the market. This is also one of the disadvantages of batik training services because the library has not been able to meet the information needs of the latest batik motives. Therefore it can be concluded that the activities of makerspace through batik training service in Gunungkidul regency has not maximally contributed to prototyping amongst the members.

Based on the results of the research done through interview and direct observation, it can be analyzed that the makerspace service conducted by Gunungkidul public library implementing this batik training activity has significantly contributed in the form of a creative environment and fostering entrepreneurship spirit for the members, albeit the activity has not been able to contribute to prototyping. This is because the library still cannot provide enough access to adequate information covering various references of latest batik designs that become fashionable and trendy in the market.

3. Economic Condition of Gunungkidul Community before and after Batik Training Service

The people of Gunungkidul regency are known as people who like to wander. The majority of their works are farmers, traders, and fishermen. As an area far from urban areas, the people of the regency find it difficult to get decent jobs. This is why many teenagers of high school graduates prefer to wander to the city to get a better job.

As a region close to the coast, Gunungkidul regency often experiences drought, so that its agricultural sector becomes less profitable. In addition, there are still many people who are not concerned with education. As a result, many children do not continue their education to higher levels. This condition makes the economic quality of the community cannot be stated good until now.

However, the economic condition of Gunungkidul community, particularly those who live around the public library, has changed after the batik training service of the library. Based on the research results, it is found that about 50 training members consisting of housewives said that their family's economy has increased. They admit in the interview that this happens due to the batik training that provides an ability to make batik. One of the informants said that the average income of the batik made can be sold at a price between 120,000 - 200,000 per piece.

From the sale of this batik, the members will get additional income to meet the needs of their family. In addition, some members also claimed that after the batik training service they no longer rely on income from their husbands, because almost every month they get orders. This means that the makerspace service in the form of batik training in Gunungkidul gives a positive impact on the community, especially the training members that are able to improve the quality of economic condition of their families.

3.1 Discussion

Referring to the results of research in the field, the researchers demonstrate that the activities of the makerspace conducted by the public library of Gunungkidul through batik training can improve the economy of the community living around the library. This can be seen from an evidence that the training members are satisfied with the availability of the training because it helps them improve the economic quality of their family. However, since the batik training has been running long enough, it also has several obstacles as the following:

3.1.1 Lack of promotion and marketing

This batik training service activity has been running since 2014. Dozens of housewives who become members have been adept at making batik so that they are capable of creating various kinds of batik designs. However, the production of batik made still not all can be sold to the market because people do not know much about the batik production. This is due to the lack of promotion and marketing to other areas. Batik distribution area of Gunungkidul is still limited in the area of Yogyakarta and has not been much penetrated into this region. This causes the production of the batik to be not sold into many other areas outside Yogyakarta and consequently the members' incomes have not been stable yet. Therefore, it needs sufficient marketing capability and facilities to help expand the promotion to various regions in order to increase the incomes of the members.

3.1.2 Lack of capital

In addition to the lack of promotion and marketing expertise, batik training held by Gunungkidul public library also has an obstacle concerning the availability of capital to support batik business for those members. During this time batik training activities in Gunungkidul regency have received assistance from the Regional Government Budget (APBD) of Gunungkidul. However, the members still feel not enough with the help because

the number of members is increasing. This makes the needs for facilities of batik practices also to increase. In addition, the members also need enough batik materials to be produced in order to increase the production of batik. Therefore the members hope that this batik training activity can get sufficient capital so that income from batik production increases.

Based on the described results, it can be concluded that the makerspace activities in the form of batik training in Gunungkidul public library can contribute, namely: to grow entrepreneurial spirit and produce a creative environment. However, the contribution to prototyping cannot be fulfilled because the library does not provide enough information facilities and references to the members about batik motives and designs that are much on demand by market. As a result, batik training members have not all been able to provide unique and interesting batik design ideas. It also has an impact on less maximal batik training activities. In addition, the emergence of the two obstacles in the form of the lack of capital as well as the lack of promotion and marketing makes the activities of makerspace have not been able to improve the economic quality of the members in a maximum way. Therefore, the researchers analyze that the batik training activities need to be supplemented with some synergic actions in order to reduce the existing obstacles. These actions meant are in the form of access to technology, capital and market in order to achieve the improvement of economic quality of community maximally. Thus, the researchers design a model for implementing the makerspace at libraries based on entrepreneurship as follow:

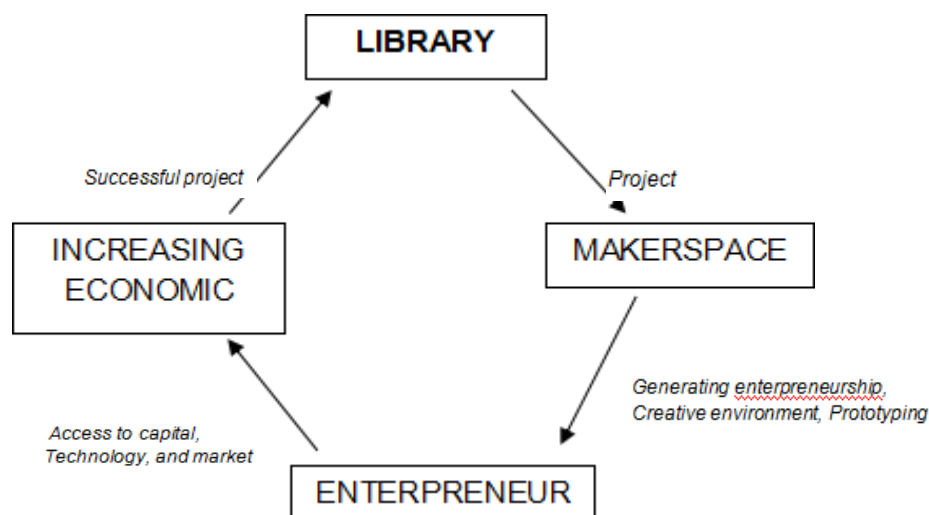


Figure 1: A model for implementing entrepreneurship-based makerspace (by researchers, 2017)

4 Complementing the makerspace contribution

This makerspace implementation model is deserved to be implemented by libraries that want to implement an entrepreneurial-based makerspace model. Entrepreneurship supports - synergic actions - need to be provided in order to complement the makerspace contribution as follow:

4.1 Access to capital

Entrepreneurship-based makerspace activities with creating batik designs must be supported with sufficient capital. This capital determines how much batik production can be made. By providing easy access for members to sufficient capital will greatly assist them in producing batik. This will also correlate with many opportunities for profit because the more capital they have the more batik will be produced and finally the more batik can be sold.

4.2 Access to technology

Access to this technology will greatly assist members in doing promotion. Given the current technological progress running more rapidly, then the technological media can be a very effective promotional tool. Each member can be given good marketing skills through technology, such as social media or web creation. Access to this technology is also able to be a source of references to create design ideas of batik motives that are much on demand by market.

4.3 Access to market

Ease of access to market is strongly influenced by members' access to technology. The ability of members to access the market properly can be supported through the provision of good promotional skills. Members need to be trained in good sales techniques in order to keep consumers interested. In addition, the library can also hold various events, such as exhibitions or product socialization so that members get good access to market or consumers. So, the better access to the market, the more the product opportunities are known to the consumer.

Therefore, the implementation of entrepreneurial-based makerspace model through batik training held by public library of Gunungkidul regency can improve the economic quality of community. However, since the contribution of the makerspace activities has not been sufficient yet, as a result, it has not been enough to improve the economic quality of the members. It is found that there are some obstacles and/or shortcomings, namely the absence of an entrepreneurial value atmosphere. This condition is clear that the implementation of entrepreneurship-based makerspace becomes urgent. Therefore, the entrepreneurs' support is extremely needed in order to help realize the success of the program. Such entrepreneurship support should be included in the makerspace model in order to improve the economic quality of the members.

5. Conclusion

Based on the result and discussion of the research, it can be concluded that the makerspace activities in the form of batik training held by Gunungkidul public library are able to contribute a creative environment and entrepreneurship spirit to the members. However, the makerspace activities have not significantly contributed to prototyping because the public library has not been able to provide adequate references of sources for the members, so that they do not give many design ideas and batik motives that the market is interested in. In addition, the batik training activities also have obstacles in the forms of lack of capital and promotion that cause batik training activities to be not able to improve the members' economy in a maximal way. Therefore, the researchers propose a model for implementing makerspace suitable for improving the economic quality of the community through providing supports in the form of access to capital, technology, and market. Access to this capital can be done by increasing the budget for batik training, while access to technology can be done through the use of the computer as a medium to create promotion and access to the market. This can be done through providing the exhibition or socialization of the resulting product. All three of these contributions also need to be given to support the success of the program. By using this model, the entrepreneurship-based makerspace activities will improve the economic quality of the members.

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