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# Strategies for Improving Workers' Skills through Crafts Product Innovation

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***Abstract:*** *In this modern era, the demands on various innovations have become unavoidable things. The traditions in Indonesia are also required to bring innovation both in value, physical products, behavior and skills of its society. An example of this is the tradition of making traditional fabrics in Tuban, East Java, which is currently considered slow in presenting various innovations. For a long time, this tradition has not presented new positive values . It also showed the low novelty of its traditional products in the form of gedog woven fabrics. The main obstacle to this is because the characteristics of the people in Tuban tend to be conservative both in thinking and skills. Although some innovation efforts have been made, the craftsmen are considered not ready to change and break out of traditional patterns. Through an experimental approach, by referring to the theory of innovation diffusion, a process of incorporating innovation will be carried out in the form of developing gedog woven fabrics that involves craftsmen by dividing it into two groups, innovators and early adopters, while still adopting some of the existing traditional work patterns. Thus, a conclusion will be resulted in the form of an appropriate strategy to improve the work skills of craftsmen as well as producing an innovation on a traditional product in the form of woven fabrics in the form of new motif designs. This can also be a recommendation to be applied to other community groups in Indonesia who have a tradition similar to Tuban, East Java.*

*Keywords: Strategy, Innovation, Skill, Craft, Craftsmen*

## I. INTRODUCTION

The culture owned by Indonesian people is rich in diversity. The cultural expression in Indonesia have resulted in various physical culture in the form of traditional artefacts such as traditional fabrics. Until now, some of these traditional types of fabrics still survive due to the ongoing process of inheritance carried out by local communities to subsequent generations continuously. However, it cannot be denied that at this time there has also been a change in the form of shifts both in terms of values, functions, and aesthetics.

Efforts made to maintain the existence of tradition are not enough to be done only in conservative ways; but it also needs to be done by means of innovation, one of them is through design. In general, the problem of applying innovation through design to traditional products is not a new discussion. The main problem is that industrialization, new technology and design are often unable to correlate with tradition. This tends to force traditions to change without considering the wisdom value they have or considering the ability of environmental and human factors. As a result, the efforts of implementation often lead to the products that are separated from the tradition context (Nugraha, 2012: 123).

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Most of the *gedog* weaving crafters who still survive in Tuban have conventional mindset and mentality. They are difficult to open themselves to new things, such as: new skills, new work tools, or new designs. As a result, there are more elements in the tradition that are unable to face the dominance of modernization. It is proven that the number of craftsmen who are still doing weaving and batik work in Tuban is decreasing every day (Ciptandi, 2016). So, the best solution is to find the right strategy to improve the quality of craftsmen who have an open mindset for innovation. This strategy needs to be applied by taking into account the principle elements in the habit of making fabrics owned by previous crafters.

Referring to the explanation of Joedawinata (2005: 49), this condition is caused by the way people see that as traditional artifacts. They see them as an answer to find solutions in order to survive and improve the life quality. It is for this reason that changes in the form of development of traditional artifacts always continue to occur, in line with challenges in life that also continue to increase. Tradition inevitably needs to transform and present novelty as a way of adapting to ever-changing environmental conditions.

## II. LITERATURE REVIEW

### *Characteristics of Craftsmen Communities in Tuban*

Sociologically, the character of the crafters community in Tuban is influenced by ethnicity which is depicted in a series of values and culture represented by ethnic Javanese culture values. While psychologically, the influence of the environment in Tuban is a coastal and agrarian area; also influence the shape of the society character (Ciptandi, 2018).

According to Kusumah (2011: 10-11) socio-cultural coastal communities have maritime cultural characteristics oriented to the sea and markets. This tradition then developed into a cosmopolitan, inclusive, egalitarian, outward looking, dynamic, entrepreneurial and pluralistic culture and life attitude. Coastal characteristics that are open access make Tuban people accustomed to the conditions of trade competition and toughness. While the agrarian characteristics of the Tuban people precisely illustrate the characteristics of smoothness and slow work as long as it is finished.

### *The Innovation Diffussion Approach*

The diffusion theory of innovation according to Rogers (1983: 10-27) is a communication theory needed to explain how a new idea and technology can be disseminated to a social system of society. Rogers stated there are at least 4 main elements of the conditions for this theory to be carried out, namely: 1) Innovation, 2) Communication media and ways of communicating, 3) time constraint, and 5) social systems of society.

Furthermore Rogers (1983: 20-22) added that the process of innovation diffusion takes place through five stages of decision making, as follows:

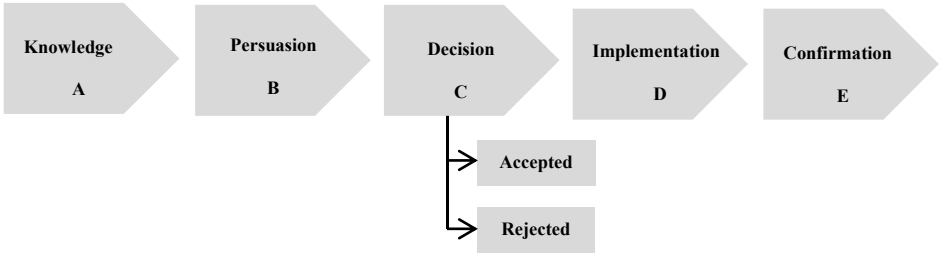


Figure 1: Levels of Adaptation Process in Diffusion Theory of Innovation (Source : Roger, 1983)

Description :

A: Knowledge Level, a person starts for the first time exposed to innovation but lacks information about the innovation.

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B: Persuasion Level, a person starts to be interested in innovation and actively looks for information about things related to the innovation.

C: Decision Level, a person accepts an innovation concept and starts to consider the advantages / disadvantages of using that innovation.

D: Implementation Level, a person starts to use innovation depending on the situation. During this stage the individual can also determine the usefulness of the innovation and perhaps seek further information.

E: Confirmation Level, a person finally decides to determine his decision to continue to use the innovation.

In innovation diffusion theory, there is a term known as 'adoption rate' which is defined as the relative speed of adopting an innovation. This level is divided into five, as follows:

1. Innovator: willing to take risks, having the highest social status, having financial security, be sociable and having a close relationship with other innovators.
2. Early adopters: having the highest level of opinion leadership among other adopter categories, having a higher social status, financial ability, and better education. In terms of making decisions, early adopters are more careful and prudent than innovators in order to maintain their position in central communication.
3. Early majority : adopting innovations with varying time periods and longer than innovators and early adopters. They have above average social status, have a close relationship with early adopters, and rarely hold opinion leadership positions in a social system.
4. Late majority: adopting innovations with a high degree of skepticism, only being able to adopt innovations after the majority of people adopt these innovations, generally having low social and economic status, related more to the final majority categories, and only few having opinion leadership in social systems.
5. Late adopters/Laggard: the last group to adopt innovation, are reluctant to change, tend to do things on the basis of traditional behavior, have the lowest social and economic status, are generally old, and only related to family and friends.

**1. Research Methodology**

Involving active participation from the Tuban community which previously grouped according to their age level, namely: 1) the young age group between 18 to 30 years, 2) the middle-aged group between 35 to 45 years, and 3) the old age group with the age range of over 50 years. Each group at that age level will be given an experimental assignment based on their skills in weaving and making batik.

Experiments carried out by conducting various experiments on *gedog* weaving through the provision of certain treatments whose impacts will then be observed / measured. The experimental assignment was carried out using the theory of innovation diffusion approach i.e how new ideas and technology could be disseminated to the social systems of the people in Tuban through communication so that the new ideas and technology could be accepted into their traditions.

The assignment process begins with determining the weaver community target that will be involved as participants by finding craftsmen with the quality of innovators, early adopters, and early majority adopters based on their age level.

Table 1: Category of Innovators and Early Adopters of Gedog Weaving Based on Age Groups

| Age Group | Category | Involvement |
|---|---|---|
| Young | Innovator | N/A |
| 18 - 30 years old | Early Adopter | 1 females |
| | Early Majority | 2 female |
| Middle-Aged | Inovator | 2 females |

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| | | |
|---|---|---|
| >30 - 50 years old | Early Adopter | 5 females |
| | Early Majority | 2 females |
| Old | Innovator | 1 female |
| > 50 years old | Early Adopter | N/A |
| | Early Majority | N/A |

## III. FINDINGS

The recommended strategies, for improving the work skills of the craftsmen through craft product innovation, carried out using the innovation diffusion theory approach, with a case study on traditional artifacts i.e gedong weaving typically from Tuban, are as follows.

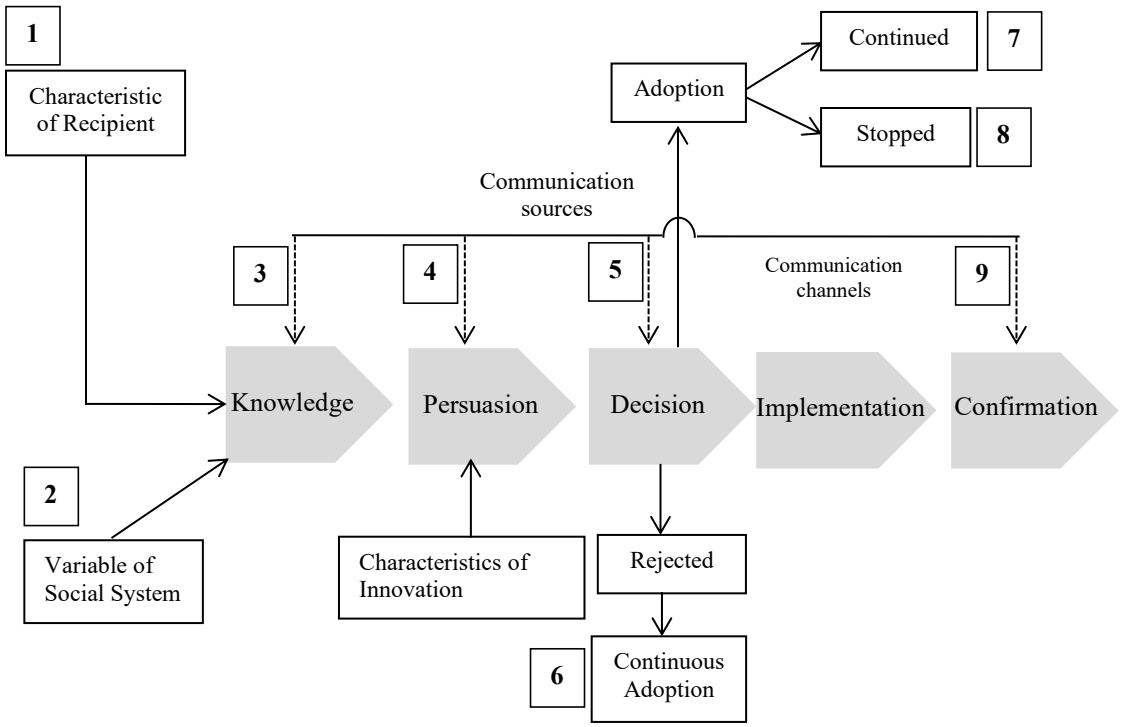


Figure 2: Strategies for Improving Workers' Skills through Crafts Innovation in *Gedog* Weaving Products with the Theory of Diffusion Innovation in Tuban

Description :

1 : The knowledge and understanding of the specialty and characteristics of the Tuban community that become the target recipients of innovation are as follows:

a. Personality characteristics of each person in a diverse society in terms of accepting change (some tend to be conservative, others begin to accept ideas about novelty), or other personality findings representing the nature of some people in the community (eg patience, hardworking, quitter, or a good learner),

b. The social characteristics of Tuban people who are moving away from rural characteristics to semi-urban characteristics,

c. The need for newness / innovation is driven by the sense of urgency,

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d. The characteristics of the environment in Tuban which is an arid area where most of the land is an area of gardens and rice fields, thus contributing to shape behavior, how to work, and how to survive in the Tuban community.

2 : Variables in the social system in Tuban are as follow :

a. The system and social norms prevailing in Tuban which are not based on customary rules, but rather in accordance with regulations established by the local regional government

b. Proven social inequalities and tolerance do not cause conflict even though there are differences at the economic, social and belief levels. All of them live in an integrated social order and contribute roles to each other.

c. Communication is carried out in languages that can be understood by each other on an equal level (between people) or hierarchy (for example: between owners and craftsman). All communications are going well.

3 : All combined information related to the knowledge needs of the innovator before determining which innovations will be given. This is important so that when innovation is ready to be applied to the craftsmen community in Tuban, there will be no conflict and serious rejection. This stage of the research is carried out by strengthening the understanding of the environmental characteristics, traditions and people of Tuban through literature studies, field investigations and interviews.

4 : Persuasive communication channels / persuasion from innovation contributors to the community of traditional fabrics craftsmen in Tuban (innovators). This stage is done by adjusting the communication patterns usually occur in Tuban environment i.e it should be delivered in a language understood by them (when the craftsman is not able to speak Indonesian, then an interpreter/assistant will help to translate). Additionally there must be a relaxed conditions so that communication is more directed like a daily conversation but has been inserted with an invitation to innovate. Furthermore, aids are needed (in this case ways to explain the process of innovation using tools in the form of false drawings for the Tuban community). It is necessary to first make a prototype of the fabric development, then the craftsmen imitate it by conducting a previous trial process to get the expected shape.

5 : The communication channel for innovation information passed on by innovators to a group of early adopters, and subsequently from the early adopters will continue to extend to the early majority adopters, to the late adopters. The spread of innovation in this study is limited to one year and ends up in the category of early adopters. For information dissemination to reach the final adopters, a longer duration is needed.

6 : After the innovation and communication patterns were persuasively given (in accordance with point 5) , the batik craftsmen and gedog weavers could make their decision whether to accept the innovation or reject it. From the experimental assignment to 3 innovators, there was 1 rejection from the group of innovators who did not want to be involved in the experimentation process, namely Mrs. Uswatun Hasanah. The reasons stated were not due to basic principles, but for her health reasons. Thus, the communication channel of Uswatun Hasanah's mother was stopped.

7 : After the innovation was given persuasively and the communication patterns carried out according to point 5, a decision was made by the gedog craftsmen to accept the innovation. From the experimental assignment to 3 innovators, it was found that 2 innovators received the given innovation. Then, the information channel carried out by 2 innovators has given results in the form of acceptance of innovation to early adopters and early majority adopters, although with different levels of readiness.

8 : After the innovation was given persuasively and the communication patterns carried out according to point 5, a decision as made that none of the 2 innovators and subsequent adopters decided to stop continuing innovation. This shows

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that the innovations given did not cause conflict, causing disappointment to the craftsmen community. Another thing can also probably because there are no other new innovations yet that can replace previous innovations.

9 : The final decision of the *gedog* craftsmen in Tuban to continue implementing the innovation. This can be seen from the fact that after the experimental assignment process has been completed, the batik and *gedog* craftsmen involved in the experimental assignment are still continuing to make developed fabrics.

## IV. DISCUSSION AND CONCLUSION

Innovations in *gedog* weaving were given in the form of the development of *gedog* woven fabric design. In the end, the success of the innovation was measured by how the diffusion theory of innovation carried out so that it could invite the involvement of the craftsmen to apply design innovations, resulting in an increase in terms of the appearance of the *gedog* woven fabric compared to the previous one.

Table 2: The Improvement of Skills and Appearance of Gedog Fabrics.

| No | Characteristics | Traditional *Gedog* Fabrics | Improved *Gedog* Fabrics |
|---|---|---|---|
| 1 | Images |  |  |
| 2 | Forms | Dimensions are 60 cm wide and 90 cm maximum with adjusted length. Its surface tends to be flat without texture and not varied. | Dimensions do not change, resulting in several variations of texture on the surface of the fabric so that it looks more attractive. |
| 3 | Visuals | The resulting fabric is plain white | The color does not change, but there are patterns formed by the design of woven structures. |
| 4 | Process / skills | The process of weaving fabrics with the principle of plain weaving is done by making a standard braid pattern. These patterns making process have been carried out for a long time by the people of Tuban without any changes. | The process of making fabrics is developed by adding a process of braiding threads with special patterns to produce new motifs and textures. This process requires high concentration. |

Therefore, it has been proven that the strategy implemented was successful for *gedog* weavers in Tuban. A group of craftsmen involved in the assignment of experiments have shown the ability to get out of the dependence of the traditional fabric making process, which for decades they have been unable to change. The design innovation applied also tried not to be selfish, by still letting some traditional work patterns left. However, this has provided evidence that this strategy was able to open up the potential for traditional craftsmen to be more open to the presence of change.

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