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Creative Economy Innovation Through "Batik Tulis" with Natural Dyes as a Sustainable Development Solution

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Abstract:
This research begins with the conditions of UKM Batik Fitris', which is a forum for people to be able to work, be creative and be productive as entrepreneurs, namely by producing batik. The selection of hand-written batik products is based on the capabilities of the village community and also considers low-risk products. The results achieved from this community service activity are changing people's mindsets into effective entrepreneurs with a batik learning program made from superior natural dyes. In this community service activity, the method used is a qualitative and intensive approach, namely about the community receiving intensive entrepreneurial learning and mentoring from teachers and practitioners working in the batik field. The use of natural materials as batik dyes is intended to avoid causing waste that is harmful to living creatures or the surrounding environment.

Keywords:
Entrepreneurship, Handwritten Batik, Natural Dyes.

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INTRODUCTION

The condition of Sidomukti Village is still relatively underdeveloped in terms of the world of batik. Of course, this is the basis for the formation of UKM Batik Fitris'. This initiative is useful in supporting the increase in population potential in order to not only depend on crops and plantations for their livelihoods, but also on other potentials, such as batik making. UKM Batik Fitris' is a community that is committed to helping people with a mindset of independence and entrepreneurship in order to alleviate people from poverty and malnutrition. One of UKM Batik Fitris' flagship programs is hand-written batik. These batik activists are provided with knowledge, training, capital, and intensive assistance in making written batik. The hope is that the people in Sidomukti Village will be able to be economically independent, not just depend on limited crop yields. Furthermore, they can have a better life in the future.

As a forum for community empowerment, UKM Batik Fitris' still has several weaknesses. The recording process carried out by UKM Batik Fitris' is still manual and simple. There have been no financial reports prepared for each period, so it cannot be known what the financial position of UKM Batik Fitris' is. Financial reports have an important role for a business; by looking at the financial position of the business it can be a basis for actors to take policies for the sustainability and progress of the business.

Production activities and demand for batik during the COVID-19 pandemic experienced a very significant decline. So far Batik Fitris UKM has not had independent marketing or used social media, marketing only relies on relationships and word of mouth so that its consumer reach is limited. So, the existence of various policies limiting community activities also has an impact on the batik production and marketing process from production sites. Apart from that, the batik assistants are still limited in number and do not have extensive knowledge regarding batik innovation, especially hand-written batik, so the quality and variety of products produced are limited compared to the many batik competitors on the market today.

Based on partner problems, the solutions offered in this community service are as follows: first; Providing training to assistants regarding written batik innovation, in the form of direct training and comparative studies. second; Formation of a model formulation used in developing entrepreneurial programs at UKM Batik Fitris'. third; The use of natural materials to produce batik motifs made from natural dyes is environmentally friendly, saves production costs, and has a higher selling value compared to chemical dyes.

METHOD

The target of this Community Partnership Program is batik craftsmen in Batik Fitris, Sidomukti Village, Dendang District, East Tanjung Jabung Regency. The implementation of service activities involves several parties, including UKM Batik Fitris, the Sidomukti Village Government, entrepreneurship speakers, and batik practitioners. The implementation of the community partnership program in 2023 in resolving the problems faced by partners is carried out in five stages, namely the program socialization stage, training in making natural dyes, training in making hand-written batik, training in preparing financial reports based on information technology, as well as marketing and sales training based on digitalization technology.

The first stage is the program socialization stage. At this stage, program outreach is carried out to partners, namely UKM Batik Fitris' regarding the service plans that will be carried out as well as coordinating with partners for the smooth implementation of the program and then mapping the potential of members of UKM Batik Fitris'.

The second stage is training in making natural dyes. At this stage, training was given to UKM Batik Fitris' batik production assistants directly as well as comparative studies to the Jambi batik center. Next, the assistants will provide training to batik makers in Sidomukti Village.

The third stage is training in making written batik. At this stage, Batik Makers are given

training to make batik with new designs using tools that are modified in such a way as to produce various motifs. Copper batik stamps and electric canting are intended for batik makers who have better understanding skills. Using the new tools you have will create batik products that are more valuable.

The fourth stage is technology-based marketing and sales training. At this stage, the role of STIE Syari'ah Al-Mujaddid Tanjung Jabung Timur is as a website creator and conveying digital entrepreneurship ideas to UKM Batik Fitris' activists as a form of global promotion. The skills provided are marketing training, financial literacy, and modern skills development (creative, communication, collaboration).

RESULTS AND DISCUSSION

One of the cultural heritages of our ancestors which still survives, develops and is very popular and liked by indigenous people and even abroad is the art of batik craft. This shows that the art of batik craft is able to become a national cultural identity, as well as a cultural code of the nation's culture so that it should be taken into account by its community both on a national and international scale.

In its development, before Indonesian people became familiar with synthetic dyes, our ancestors used plants as dyes for batik craft products. To get this natural color you have to go through boiling/extraction, soaking or fermentation. The parts of plants that can produce color are wood, bark, fruit, fruit skin, root bark, leaves and even flowers. Batik products with natural dyes have distinctive and unique properties and colors that cannot be imitated by synthetic dyes. The resulting product is very elegant and has high artistic value, but the manufacturing process is more difficult and takes longer than synthetic coloring. Difficulties with this natural coloring include: in procuring and preparing the raw materials for coloring, taking the color, and even when coloring it, it must be done repeatedly patiently, thoroughly and carefully so that an even color is obtained.

The discovery of synthetic dyes in 1870, which were more practical and relatively easy to use, resulted in natural dyes gradually receding, because batik craftsmen switched to using synthetic dyes, so that the use of synthetic dyes flooded all textile products, even in their use there were sometimes deviations from the recommendations that had been made. established, for example, dyes that are supposed to color textiles are sometimes also used to color food.

Until finally, in 1996 the Embassy of the Republic of Indonesia in the Netherlands issued a warning about the dangers of certain types of synthetic dyes to the health of producers, consumers and the environment. This incident then became a motivation for all of us to return to using natural dyes (back to nature) and abandon synthetic dyes which are very risky, especially if the waste is not managed properly and will seriously pollute the environment.

Natural dyes are dyes produced from nature/plants. Every type of plant can produce dyes because they contain natural pigments. One type of plant can produce more than one type of color. There are lots of plants around us that can be used and become a source of natural dyes such as:

mango leaves, putrimalu, jackfruit wood, mahogany bark, noni root bark, tom leaves (Indigofera tinctoria) and many more.

1. Training on Making Natural Dyes

One way to extract color from the source is by boiling it with water to dissolve it. For example: To get a brown color (soga) it is obtained from jambal bark, tall bark and tegeran wood successively in a ratio of 4: 2: 1. Boil them together with enough water until the volume of water is reduced by ± a quarter then cool, strain until the solution and color are clear. ready to dye the fabric.

2. Batik Making Training

There are several steps that need to be taken in the process of making written batik. These processes include mordanting, extraction, batik coloring, and fixation.

a) Mordanting Process

The mordanting process is the process of binding certain materials to batik media or cloth. Materials that can be used in the mordanting process include alum metal salt or alum and tanjung or ferro. The mordanting process is carried out to help bond the color to the media or fabric with the aim of ensuring that the natural dye does not fade easily. This substance can also develop fabric fibers so that the fabric is easy to dye so that the color is stronger and lasts longer.

The media used in the mordanting process can be silk or cotton fabric. The choice of media also influences the materials needed in this process. The materials needed when using silk fabric are as follows:

- 500 grams of silk cloth
- 100 grams of alum/alum
- 17 – 20 liters of water

The mordanting process that must be carried out when using silk fabric media includes wetting the fabric and then draining it. Next, boil the cloth using 17 to 20 liters of water and 100 grams of alum until it boils, then put the cloth in the boil for ± 1 hour, then cool and wash until clean. After that, dry it and the cloth is ready for batik.

Meanwhile, the materials needed when using cotton fabric are as follows:

- 500 grams of silk cloth
- 100 grams of alum/alum
- 30 grams of soda ash
- 17 – 20 liters of water

The mordanting process that must be carried out when using silk fabric media includes wetting the fabric and then draining it. Next, boil the cloth using 17 to 20 liters of water, 100 grams of alum, and 30 grams of soda ash until it boils, then put the cloth in the boil for ± 1 hour, then cool and wash until clean. Next, dry it and the cloth is ready for batik.

b) Extraction or boiling process

The extraction or boiling process is a process carried out to extract dyes that will be used to make batik. Boiling is carried out on the desired coloring material with a certain ratio.

c) Dyeing Process Indigo Making Process

The most primary natural color is blue/indigo. To get the source of the blue color, you can get it from the leaves of Tom (Indigofera tinctoria). The method is to soak the leaves in sufficient water. After soaking for ± 7 hours, air bubbles will come out and the water solution will turn green. The soaking process takes between ± 24 – 40 hours. Then separate the leaves from the water and strain until clean. Add the lime that has been dissolved in water, where for 1 kg of lndigofera tinctoria leaves you need 25 grams of lime, then bury it (filling and emptying the liter). When melting, blue foam will appear. The melting can be stopped if the blue foam disappears and the solution is dark blue. Leave the solution for ± 5 hours so that a precipitate occurs, then discard the top water and you will get an indigo precipitate or indigo paste.

d) Coloring Process

The steps involved in dyeing using indigo or blue are as follows:

Alternative 1:

- Dissolve 1 kg of indigo paste in ± 10 – 15 liters of water.
- Add 1 kg of dissolved brown sugar (boiled in 1.5 liters of water)
- Add 100 grams of tunjung
- Add ± 1 liter of lime water, stir and leave overnight until the next day the solution is yellowish green and ready to use.

Alternative 2:

- Dissolve 1 kg of indigo paste in ± 15 liters of water
- Add 1 liter of lime water
- Add 1.5 kg of cassava tape
- Close and leave for ± 48 hours until we get a yellowish green solution
- Wet the cloth with water then drain it then put it in the indigo solution for ± 15 minutes
- Remove then rinse with clean water then let air dry
- Repeat the method above until the color matches what you want

Note: Use of brown sugar can be replaced with tape (without boiling) or tunjung.

e) Fixation Process

After finishing coloring, so that the color is stronger and does not fade, it is necessary to bind it with a fixative solution. Fixation can be done with: lime, alum/alum and tunjung with the following measurements:

- 20 grams of tanjung with 1 liter of water
- 50 grams of alum with 1 liter of water
- 70 grams of lime with 1 liter of water

Dissolve each (lime, alum and tanjung) with water according to the size, let stand overnight. Take the clear water, then put the finished dyed cloth in clear lime water, alum water or tanjung for ± 5 minutes then remove and wash with clean water. The cloth is ready to be stripped/removed by wax/night. How to remove: put the cloth in boiling water mixed with starch, repeat several times until the wax is clean/removed.

CONCLUSION

creative economic innovation development activities through written batik with natural dyes which have been initiated and carried out by the STIE Syari'ah Al-Mujaddid Tanjung Jabung Timur campus in collaboration with batik activists UKM Batik Fitris' and the local village government have been able to develop their creativity by utilizing Natural materials as media or materials for written batik that are environmentally friendly, effective, cheap and safe. By applying this natural dye, of course batik will last longer if special care is taken, both in washing and drying. To wash it, simply soak it with water and dry it, while drying it simply air it out in a shady place. By returning to using natural dyes, it means that we have helped maintain and maintain balance and sustainability.

REFERENCES

Abaharis, H., Badri, J., Alfian, A., & Das, N. A. (2023). Inovasi pewarnaan alami batik tanah liek salingka tabek koto baru solok. *Swarna: Jurnal Pengabdian Kepada Masyarakat*, *2*(6), 671-676.

Aditya, A. (2015). *Analisis Adopsi Inovasi Pewarnaan Alami Pada Pengrajin Batik Di Desa Giriloyo, Imogiri, Bantul, Yogyakarta* (Doctoral dissertation, UPN "Veteran" Yogyakarta).

Aldi, M. *Evaluasi Program Kampung Batik Cibuluh Binaan LPEM BAZNAS untuk Pengembangan Potensi Budaya Lokal di Kelurahan Cibuluh Kota Bogor* (Bachelor's thesis, Fakultas Dakwah dan Ilmu Komunikasi Universitas Islam Negeri Syarif Hidayatullah Jakarta).

Aryanto, V. D. W., Umboh, I. A., & Si, S. M. (2023). *Buku Monograf Peran eko-inovasi berbasis kearifan lokal untuk meningkatkan kinerja pemasaran UMKM Batik pewarna alami*. CV Pena Persada.

Badan Pusat Statistik. (2022). Statistik Daerah Kecamatan Dendang 2022. Arsip Daerah:Badan Pusat Statistik Kabupaten Tanjung Jabung Timur.

Bhatti, Y., dan Ventresca, M. (2011). The emerging market for frugal innovation: fad, fashion, orfit?. Working Paper.

Dinas Industri Perdagangan Koperasi dan UKM Kabupaten Tanjung Jabung Timur 2019. Pendataan Pelaku UKM Dinas Industri Perdagangan Koperasi dan UKM Kabupaten Tanjung Jabung Timur Tahun Anggaran 2019. Arsip Daerah: Tidak Dipublikasikan.

Fitriana, A. Analisis Pengembangan Sumber Daya Manusia dalam Meningkatkan Kinerja Karyawan (Studi pada Industri Rumah Batik Rolla, Jember).

Hayati, Amelia. (2008). Pemberdayaan Kekuatan Ekonomi Perempuan Indonesia Orientasi Pembauran Bangsa.Bandung: BKBPMD Provinsi Jawa Barat.

Kaplinsky, R. (2011). Schumacher meets Schumpeter: Appropriate technology below the radar. Research Policy vol. 40, Issue 2: pp. 193-203.

Kemampuan Kesiapan Teknologi (TK2T). Riset Unggulan Daerah. Kebumen. Badan Penelitian Pengembangan Provinsi Jawa Tengah

Kharisma, Y., & Sudiarso, A. (2020, January). Pengujian Ketahanan Luntur Warna Cokelat Pada Kain Batik Katun Dengan Pewarna Alami. In *Semnas Ristek (Seminar Nasional Riset dan Inovasi Teknologi)* (Vol. 4, No. 1).

Kusmantini, T., Gusaptono, H., & Haryanto, D. (2019). Penguatan Rantai Nilai Produk UMKM (Studi Kasus pada Industri Batik di Bantul dalam Rangka Mendukung Potensi Batik sebagai Produk Unggulan. *Lembaga Penelitian dan Pengabdian Masyarakat UPNVYK*, 1-195.

Martuti, N. K., Hidayah, I., & Margunani, M. (2019). Pemanfaatan Indigo Sebagai Pewarna Alami Ramah Lingkungan Bagi Pengrajin Batik Zie. *Panrita Abdi-Jurnal Pengabdian Pada Masyarakat*, *3*(2), 133-143.

Munaf,Dicky R., dkk,. (2008). Peran Teknologi Tepat Guna Untuk Masyarakat Daerah Perbatasan Kasus Propinsi Kepulauan Riau. Jurnal Sosioteknologi Edisi 13 Tahun 7, April 2008.

Najwa, H. S. (2017). *Perancangan aleri batik tulis lasem di Kab. Rembang: Tema combine metaphor* (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).

Pandanwangi, A., Dewi, B. S., Apin, A. M., Damayanti, N. Y., Sungkar, A., Rianingrum, C. J., ... & Sobandi, B. (2021). *Peradaban Batik*. Ideas Publishing.

Pramesta, Y. I. (2017). *Pemberdayaan Ekonomi Kreatif Masyarakat Melalui Kerajinan Batik (Studi Kasus: Kampoeng Batik Palbatu, Tebet, Jakarta Selatan)* (Doctoral dissertation, UNIVERSITAS NEGERI JAKARTA).

Prasetyo, Andjar. (2015). Pemetaan Potensi Kebutuhan Teknologi Tepat Guna UMKM Di Wilayah Kecamatan Ambal Kabupaten Kebumen Melalui Analisis Tingkat

Rahmana, A. (2009). Peranan Teknologi Informasi Dalam Peningkatan Daya Saing Usaha Kecil dan

Menengah, Proceeding Seminar Nasional Aplikasi Teknologi Informasi SNATI 2009. Yogyakarta.

Riniatsih, I., Redjeki, S., & Maslukhah, L. (2017). Keberhasilan Usaha Pemberdayaan Ekonomi Kelompok Perajin Batik Mangrove Dalam Perbaikan Mutu Dan Peningkatan Hasil Produksi Di Mangkang Wetan Semarang.

Sulistyowati, L., Hafa, M. F., Ginting, A., & Darwiyati, D. (2022). Pemanfaatan Inovasi Produk Hutan Mangrove Sebagai Pewarna Alami Kain Batik Tradisional Malang Untuk Meningkatkan Perekonomian Masyarakat Di Desa Tambakrejo Kabupaten Malang. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, *5*(3), 810-819.

Susanti, N., & Santoso, J. (2021, April). Meningkatkan Kinerja Produksi Dan Pemasaran Dengan Teknologi Tepat Guna Meja Pewarnaan Dan Pemasaran Online Pada Tia Batik Tanjung Bumi Bangkalan. In *Talenta Conference Series: Local Wisdom, Social, and Arts (LWSA)* (Vol. 4, No. 1).

Timur, M. J. (2017). Pembelajaran Batik Tulis Etnik Mojokerto Pada Mata Pelajaran Seni Budaya di SMA Negeri 1 Gondang.

Utami, H., Darni, Y., & Lesmana, D. (2023). Peningkatan Eksistensi Pengrajin Batik Tulis Lampung Dengan Inovasi Produk Ecoprint Pewarna Alami untuk Mendukung Produk Ecolabel di Kemiling, Bandar Lampung. *Jurnal Pengabdian Kepada Masyarakat Sakai Sambayan*, *7*(1), 32-37.