



Science And Technology Program Implementation For Crafts Export Products (Iptek Bagi Produk Ekspor-Ibpe) Made Of Vinyl And Natural Fibers In Trimulyo Jetis And Sabdodadi Bantul, Bantul, Yogyakarta – Indonesia (Second Year)

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Abstract

SME handicraft products in Bantul Regency of Special Region of Yogyakarta continue to experience a significant increase in the past 5 years. This is likely because of the government's role in encouraging craft SMEs, especially the export-oriented ones. The purpose of implementing IbPE program for the second year is to focus mainly on improving the quality and quantity of production, the aspect of human resources, and marketing management on two SMEs that became partners in the implementation of this IbPE program, namely: SME 1 "Raffal Craft" and SME 2 "Syifa HandiCraft."

Methods of implementation are done by; (1) field preparation and coordination with partners for executing work plans; (2) training and empowerment, (3) improving production layout, (4) providing equipment stimuli, (5) exhibitions within the country and abroad, (6) developing websites, brochures, and catalogs. The results are summarized in general that SME partners still need the support and active participation of governments and universities as well as other stakeholders to continue to work together in doing business and technology incubation program for them, either through IbPE as well as other development programs.

Keywords: Vinyl and Natural Fibers, IbPe, Bantul Regency

1. Introduction

It is known that the handicrafts export volume from Bantul collected until 2013 has reached 5,970,925 kg with a value of transactions of 53,350,443 US dollars (<http://www.antarayogya.com/berita/326064/bantul-perluas-ekspor-keraian-nan-ke-asia>, 2014). This marks an increase because based on the data gathered until January 2013, export realization has exceeded in 2011, reaching up to 42 million US dollars (www.metronews.com, 2013). This is likely because of the government's role in encouraging craft SMEs to be export-oriented. The government has also allocated substantial funds to improve the product quality of export-oriented SMEs. With such funding stimulants, the improvement of production facilities and quality of SME products are expected to rise relatively so export sales could continue to increase (www.antaranews.com, 2013). The Bantul District government also continues to improve their skills, both for human resources and marketing, by regularly conducting export trainings. Based on the team's field observations, a common problem often faced by SMEs are identified into three, namely; the product quality and quantity, the competence of human resources, and weak marketing skills.

Therefore, community service activities in Science and Technology Program for Export Products (IbPE) in this second year is focused on finding the solutions to solve these problems, especially for the two SME partners in the IbPE program implementation, namely "Raffal Craft" and "Syifa HandiCraft" SMEs. In the second year, both SMEs are expected to provide contributions in encouraging and increasing the export realization for craft industry in Bantul. This is because both are export-oriented SMEs that produce crafts made of vinyl and natural fibers. As it is known that the Departments of

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Industry, Trade, and Cooperatives of Bantul Yogyakarta, Indonesia are committed to continue to maintain the existence of export-oriented small artisans. In addition to producing goods produced by artisans, craft industry must be environmentally friendly and hire labors in which most are from the Bantul District residents.

2. SME Problems

In general, there are various problems that can be identified on both SMEs ("Raffal Craft" and "Syifa HandiCraft"), among others are:

1. Problems in product quality and quantity. This happens because the production equipment used is still manual and lacks supporting equipment for production and other equipment needs.
2. Lack of management skills. The marketing management in both SMEs, along with their finance and accounting management, operational management, and other management aspects, are not yet professional. For example, the companies marketing their products are still dependent on trading companies around the region. Therefore, they are not directly associated with the customer.
3. Unfair competitions among SMEs owners still exist, especially in terms of price and product innovation. There are many SMEs who are too lazy in taking care of their industrial design or patent, feared that their products would be more easily replicated by local and foreign competitors.

The IbPE program activity implementation of this second year is focused on:

- a. Improving the quality and quantity of vinyl and natural fibers craft production. Results from the first year of learning have minimized defective products so that future SMEs can apply a good quality standard by having and implementing the correct Standard Operating Procedure, hoping to increase export sales.
- b. Increasing employee competencies and work ethic.
- c. Expanding export markets through implementation of marketing strategies professionally.
- d. Implementing finance and accounting management professionally.

Implementation Method

In the implementation, the team in IbPE's second year activity was asked to find the solutions to overcome the problems faced by the two SMEs; SME I "Raffal Craft" and SME 2 "Syifa HandiCraft." The solutions include;

1. Site preparation and coordination with partners for this second year's program implementation. Site preparation was done by the team in order for the activities to run smoothly as expected. The team also tried to continue communicating and coordinating with partners so that they also have the enthusiasm and commitment to make the IbPE activities successful. It seemed that the partners really welcomed the activities offered by IbPE. This is because the first year's activities went smoothly, the partners were very supportive, and they hoped the program can still be continued for a second year in a row.
2. Surveying and making work plans. The team conducted field observations. The results, as described, identified various problems between SME I "Raffal Craft" and SME 2 "Syifa HandiCraft." Likewise, the work plans that will be implemented are aimed to find the solutions and overcome the problems.
3. The results of field observations described that:
 - 1) Stimuli for the equipment given in the first year, such as the sewing machine tube, turned out to be very useful for "Raffal Craft" to improve the quality of their handicraft products. The stitches for corners and tight angles produced become a lot neater, minimizing product defects. Disordered stitches and peeled glue in product corners can be removed. The tube machine does have advantages compared to the regular machine because it could perform special treatments to reach the corners of the products being made. Results from providing the tube machine had a positive impact on increasing the sales turnover of "Raffal Craft." Some orders increased rapidly. In fact, the owner was offered to take sales orders besides vinyl, namely leather jacket request from the Netherlands by a Dutch businessman. The order also came from the website provided by the IbPE team.
 - 2) From field observation results, it was found that employees or owner had a few complaints. Many employees complained about uncomfortable working conditions. This often makes them

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less focused at work. The owners also complained about the same problems the employees face; they often feel sultry and hot while the work volume keeps increasing. The floor at work sites is also dirty and uncomfortable. The solution offered and requested simultaneously by the owner of "Raffial Craft" is to postpone the production facilities such as embossing machine or other similar equipment and replace it with revamping a comfortable and healthy workplace.

- 3) The research team gave enthusiasm and encouragement to the employees and owner of "Raffial Craft" to stay focused and maintain their work ethic so that their productivity continues to increase. Based on survey results and field observations, the owner explained about the importance of being accompanied in learning how to create a good and right way of promotion and showing how to refine the catalogs that have been given by the research team in the first year. The owner also wanted help to get mediated for joining exhibitions, both domestic and abroad. The solution offered and approved simultaneously by the owner is to make signposts ("plangisasi") and to improve brochures and catalogs, to join exhibitions.

Some training are still felt necessary by the owner and all employees to improve their management skills related to human resource, marketing, finance and accounting, import-export, production, and other management aspects such as information technology management.

Furthermore, the results found, based on field observations for SME 2 "Syifa HandiCraft," are of the following:

- 1) Result of revamping the production layout has been found to differ from the previous program. This is because of the lack of discipline and strictness from the owner in supervising employees. The employees sometimes do not pay close attention to the layout preset customized with the production flow of goods to be done from start to finish.
- 2) Providing stimuli machines for equipment given in the first year, such as the tube sewing machine, was also very useful for "Syifa HandiCraft" to improve the quality of their handicraft products, in which they were able to seam to the corner angles, thus resulting neater products and minimizing product defects. Disordered stitches and peeled glue in product corners can be removed. The tube machine does have advantages compared to the regular machine because it could perform special treatments to reach the corners of the products being made. Results from providing the tube machine gave a positive impact on increasing the sales turnover of "Syifa HandiCraft." Some orders increased rapidly. In fact, the owner was offered to take order request from different countries. The order also came from the website provided by the IbPE team.
- 3) The owner of "Syifa HandiCraft" has a good work ethic, resulting in an increased productivity. Based on survey results and field observations, the owner explained about the importance of being accompanied in learning how to create a good and right way of promotion and showing how to refine the catalogs that have been given by the research team in the first year. The owner also wanted help to get mediated for joining exhibitions, both domestic and abroad. The solution offered and approved simultaneously by the owner is to make signposts ("plangisasi") and to improve brochures and catalogs, to join exhibitions.
- 4) Website creation and development is still needed, along with mentoring in other management aspects such finance and accounting, marketing, and others.
- 5) Program Socialization. Program socialization was given to each partner to further clarify about the programs that will be implemented, expected to be useful for both partners. Short-term and long-term programs include managing industrial design, conducting website development training and mentoring, creating catalogs, procurement of equipment, and other programs correspond to field observations.
- 6) Conducting training and mentoring for reinforcing materials for both SME partners; "Raffial Craft" and "Syifa HandiCraft." Training materials include business management (entrepreneurship), marketing management, accounting and finance, import-export management, human resource management, organizational governance, and machinery and equipment layout training, materials planning (MRP/Material Requirement Planning), as well as time and labor scheduling. More details can be seen in Table I.

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Table 1. Programs and Activities Trainings Conducted on SME Partners

No	Program	Reality	Expectation	Solution
1	Training and mentoring for strengthening marketing management.	The absence of signpost.	Improved ability to offer and establish good relationships with customers.	Correction and improvement of marketing strategy (segmentation, targeting, and positioning).
2	Training and mentoring for strengthening accounting and finance.	Record-keeping is still done manually.	Improvement of management, supervision, financial and correct accounting records.	Correction and improvement of management, supervision, finance, and accounting records.
3	Training and mentoring for strengthening entrepreneurship skills.	Completed	Increased skills of creativity and innovation as well as entrepreneurship.	Improvement and enhancement of creativity and innovation as well as entrepreneurship.
4	Creating brochures, catalogues, structuring showroom, and exhibition.	Designs are still in process.	Expansion of marketing coverage area and improving corporate image.	Improving corporate image and market reach.
5	Website training and creation.		Increased ability to operate and develop businesses online.	Improved management and business development through websites.
6	Procurement of machines	Average total of 100 units per month, a total of 250 units per month on average.	Scam appearance becomes attractive, neat, and strong. Procurement of own brand with molding machines and generator set because of frequent blackouts.	Expansion of marketing methods and production efficiency.
7	Layout setting training	Layout is efficient because the layout has already been arranged	Better proper handling resulting in an improved quality of finished products.	Less product handling.
8	Export-import training		Improved ability to access export markets and manage trading relationships overseas.	Increased independence in doing business with foreign partners.



No	Program	Reality	Expectation	Solution
9	HR training for owners and employees	HR Training: export products development training and training on building networks for partnership.	Improved networking skills to develop products and partnerships.	Improvement of the ability to manage product development and networking partners.
10	Handling permit	-	-	In accordance to government regulations.

4. Providing equipment stimulation for "Syifa HandiCraft" by buying embossing machine, machinery equipment that supports the production process. The function of embossing machine is to print, emboss, and stamps the SME brand or logo on the soles, rubber materials, PVC, or leather. With the help of plate emboss/custom matress, any machines that use a heating system can be used for various applications such as shoes, slippers, pants, shirts, bags, belts, and more. The reason of purchasing this machine was to print a product logo or brand as an identity when exporting the products. But over time, it turned out that "Syifa HandiCraft" needed a power generator set because of frequent power blackouts, thus making the production becomes inefficient. If a power generator set is available, despite of power blackouts occurring, production will continue to run smoothly.
5. Assistance in layout improvements is aimed at improving the effectiveness of production activities. With a more precise layout system, "Syifa HandiCraft" is expected to be able to increase their production, reduce waiting times, reduce ineffective process of moving goods, shorten processing time, make use of production facilities efficiently, and minimize the mix-up of raw materials that are to be processed.

For Raffa Craft, the research team offered to revamp production layout supported by renovating the floor of production building in order to increase comfort and safety in the production process.

6. Creating signposts on every road for each partner. By having signposts, both partners will be known to the public and it should be pretty easy for anyone to look for both SMEs. In addition, this will make their brand names popular and the price of their products can be sold at a high value.
7. Participating in import-export exhibitions or other exhibitions that support the export orientation both domestically and abroad.
8. Creating and revising brochures and catalogs on both partners. The purpose of creating brochures and catalogs are for promoting handicraft products to external parties as well as creating a guide and a way of facilitating the partners in selling their products both directly and through social networks.
9. Completing and developing a website to make it easier to operate. In addition, the website is also created to be multi-function so that consumers can directly communicate or chat with the related SMEs, creating a two-way communication that will have an impact on increasing the effectiveness of the supply and demand process. The completion each of the partner's website is also aimed to add instructions on how to order the products, the payment procedure, and the delivery process, thus opening potential for a direct contact with consumers without going through trading companies.
10. Taking part in marketing the products of both SMEs (Raffal Craft and Syifa HandiCraft), by selling their products in the UPN "Veteran" Yogyakarta Batik and Primary Handicraft Shop. The goal is to help them develop direct selling of products by retail and to also introduce college professors-assisted SMEs, hoping to promote SME products directly to consumers or to prospective entrepreneurs in the area of higher education, with students coming from various regions across Indonesia.
11. Conducting training and developing product innovation. This training was conducted with the aim of educating both SMEs to always get used to and continuously make product innovations by combining vinyl and other products, such as natural fibers, in order to compete and excel more than their competitors.

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Conclusion

1. SME partners still need the support and active participation of governments and universities as well as other stakeholders to continue to work together in doing incubation business and technology for them.
2. Empowerment and learning process for SMEs is still needed gradually and for the long run. There is still a need of persistence and patience from all parties, especially the government, universities, and stakeholders.
3. The role and support from the Bantul government towards export-oriented SMEs are still needed in order for them to continue to improve and expand their business.
4. Aspects of operational management, marketing, finance, and accounting are all important aspects that need to be addressed.

Recommendations

1. The government should continue to provide support either directly or indirectly related to the needs of SMEs, especially in the aspect of operational management, marketing, finance and accounting, human resources, and capital as well as business and technology mentoring.
2. SMEs still need to develop local resources and potential by retaining local wisdom to create competence (unique, rare, and hardly imitated) both from local and foreign competitors.
3. IbPE program can be one of the media to bond the synergy of local government, education, corporations and other stakeholders.

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