

# E-Commerce Implementation and Product Quality Improvement to Increase Pottery Business Competitiveness

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**Abstract:** Kesilir Village, Wuluhan District, Jember Regency is a central producer of clay crafts, better known as pottery. Pottery is a tool made of clay that is formed and then burned to be used as tools that are useful for human life, such as cooking utensils, kitchen utensils, flower vases, and pots. In the Kesilir village, several MSMEs produce pottery on a home scale. One of the MSMEs that consistently produce food is MSME Lies Pottery. Lies pottery has the desire and passion for developing his business. Lies Pottery experienced several problems, the first being the limited types of pottery produced. The types of pottery produced are only cutlery, kitchen utensils, pots, and flower vases to reduce consumer interest in buying. This limited type also causes the marketed price to be quite affordable so that even a small amount is obtained. The second problem is that the MSME Lies Pottery does not yet have good financial books, so that the money from selling pottery is often used for daily needs. Poor financial accounting also makes it difficult to measure business turnover and profits. Whether or not business management is good can be seen from the financial statements made. Because based on these reports, evaluation and implementation of business strategies can be carried out to increase profits. The third problem is the difficulty of marketing pottery products. Currently, the marketing process is only done traditionally by word of mouth and through a souvenir center partner in Jember Regency. This traditional marketing causes unhealthy competition between pottery MSMEs in Kesilir villages, making price competition unavoidable. Based on these potentials and problems, the concept of empowering MSMEs was initiated with financial training, diversification of grain products, and development of E-Commerce systems. Financial training solutions are carried out to assist partners in managing and making good financial reports. So partners can measure how much total sales turnover and profits are earned each month. Financial reports are also expected to be a trigger for partners in developing business strategies. E-commerce system development solutions benefit from solving marketing problems experienced by partners. To improve marketing, apart from using the E-commerce system, training and assistance on digital marketing concepts are also carried out through social media and marketplaces.

**Index Terms:** E-commerce, Pottery, and Diversification.

## I. INTRODUCTION

Kesilir Village, Wuluhan District, Jember Regency is a central area for producing crafts from clay, better known as pottery (jemberkab.bps.go.id, 2020). Pottery is a tool made of clay formed and then burned to be used as tools useful for human life, such as cooking utensils, kitchen utensils, flower vases, pots, etc. In the Kesilir village, several MSMEs produce pottery on a home scale. Some of these pottery MSMEs are the initialization of PKK mothers to obtain additional income for the family.

One of the MSMEs that consistently produce food is MSME Lies Pottery. Lies pottery has been producing pottery since 2000. Until now, its production is increasing and has been marketed outside Jember Regency. Lies

pottery has the desire and passion for developing his business. Lies Pottery experienced several problems, the first being the limited types of pottery produced. The types of pottery produced are only cutlery, kitchen utensils, pots, and flower vases to reduce consumer interest in buying. The limited type of earthenware produced is due to the elementary tools used and the limited labor of pottery makers. To increase productivity, pottery-making tools will be rejuvenated so that the quantity of grain produced increases. This limited type also causes the marketed price to be quite affordable so that even a small amount is obtained (Yuswanto, Bhayangkara & Fadah, 2016).

The second problem is that the MSME Lies Pottery does not yet have good financial books, so that the money from selling pottery is often used for daily needs. Poor financial accounting also makes it challenging to measure business turnover and profits. Whether or not business management is good can be seen from the financial statements made. Because based on these reports, evaluation and implementation of business strategies can be carried out to increase profits. The third problem is the difficulty of marketing pottery products. Currently, the marketing process is only done traditionally by word of mouth and through a souvenir center partner in Jember Regency. This traditional marketing causes unhealthy competition between pottery MSMEs in Kesilir villages, so that price competition is unavoidable. This unfair competition indirectly creates an unfavorable business climate and makes it difficult for the pottery business to develop (Yuswanto, Bhayangkara & Fadah, 2017).

Based on these potentials and problems, the concept of empowering MSMEs was initiated with financial training, diversification of grain products, and development of E-Commerce systems. Product diversification training and development aims to solve the problems of partners constrained by the lack of Agrabah products. Product diversification will focus on the types of goods that are in high demand and have a sizable market separate souvenir blinds from clay and various utensils with attractive patterns and colors.

Product diversification also focuses on better utilization of pottery paint tools, namely using a compressor so that the resulting paint is smooth and even. Financial training solutions are carried out to assist partners in managing and making good financial reports. So partners can measure how much total sales turnover and profits are earned each month. Financial reports are also expected to be a trigger for partners in developing business strategies. The business strategy will also be given training and assistance to be independent and not have to depend on others. The business strategy will be divided into several strategies, namely: product development strategy, marketing strategy, and information technology implementation strategy. E-commerce system development solutions benefit from solving marketing problems experienced by partners. To improve marketing, apart from using the E-commerce system, training and assistance on digital marketing concepts are also carried out through social media and marketplaces (Fadah, et.al 2018). The use of social media as a place for promotion and product sales is used to improve branding and as an easy and effective promotion (Setyowati & Fadah, 2016). The social media used are Facebook and Instagram. These two social media were chosen because they have many active users and have features that are easy to use by ordinary people (Auliya, Nurdiansyah, and Wulandari, 2018). In addition to using social media, partners are also directed to take advantage of marketplaces that are currently widely used, such as Shopee and Tokopedia.

## II. PRODUK DIVERSIFICATION

Financial training solutions are carried out to assist partners in managing and making good financial reports. The training output is that partners can measure the total sales turnover and profits they get every month. Financial reports can be a trigger for partners in developing business strategies. In addition to financial training, assistance will be provided so that partners can be independent and do not have to depend on others. The business strategy will be divided into several strategies, namely: product development strategy, marketing strategy, and information technology implementation strategy. The resulting output is the partner's Financial Report.

Quality improvement and diversification of pottery products are carried out by rejuvenating the currently used production equipment with more modern tools. Rejuvenation of tools is expected to improve the quality and quantity of the resulting grain products. Product diversification training and development aims to solve the problems of partners constrained by the lack of grabah products. A coloring technique is used using a paint compressor machine for maximum coloring results to make the product more attractive. Product diversification will focus on the types of goods that are in high demand and have a large market, such as clay souvenir blinds and various equipment with attractive patterns and colors. The product diversification also focuses on the use of better pottery paint tools, namely using a compressor so that the resulting paint is smooth and even. The output produced is a diversified product of processed pottery, namely: souvenirs, writing utensils, and home knick-knacks of various shapes and colors. The resulting product must have attractive packaging to increase consumer interest in buying. It is hoped that with the diversification of partners, welfare products will increase.

E-commerce system development solutions benefit from solving marketing problems experienced by partners. To improve marketing, training and assistance on digital marketing concepts are carried out through the use of social media and marketplaces. The use of social media as a place to promote and sell products is used to improve branding and as an easy and effective means of promotion (Gaol, 2008). The social media used are Facebook and Instagram. These two social media were chosen because they have a pretty large number of active users and have features that are easy to use by ordinary people. In addition to using social media, partners are also directed to take advantage of marketplaces that are currently widely used, such as shopee and tokopedia.

## III. METHODOLOGY

This service is carried out for 1 year. To optimize the achievement of service, the activities are divided into 3 stages, namely: Pre-activity stage, activity implementation stage and post-activity stage. Based on the description of the solutions to the above problems, we arrange the steps to be taken so that the objectives can be achieved. The preparation of work steps is prioritized in solving urgent problems can be seen in figure 1

### 1. Pre Activity Stage

The pre-activity stage is an activity carried out before the core service activities are carried out. Some of the activities carried out during the pre-activity were: follow-up observations and data collection and socialization of service programs. The pre-activity stages can be seen in Figure 1.



Figure. 1 Stage of Pre-Activity

### 2. Stage of Activity

The activity implementation stage is the core activity of the service carried out. In detail the activities at the implementation stage can be seen in Figure 2.

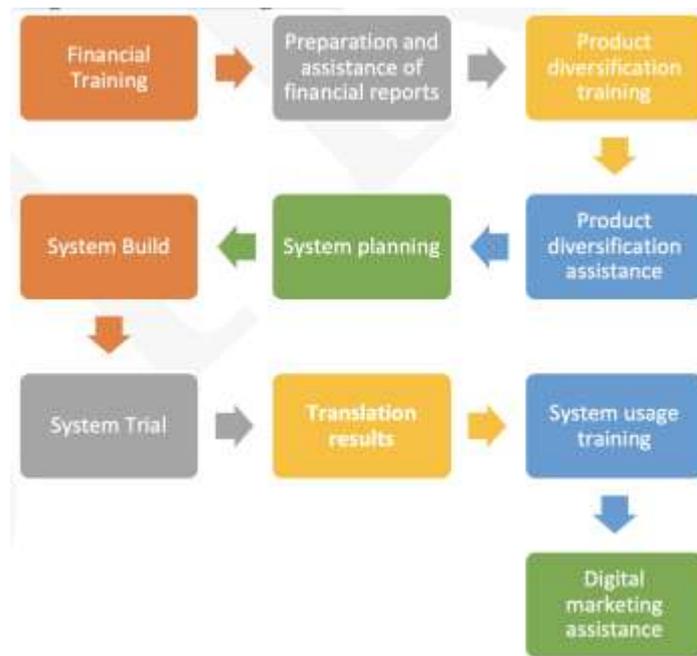


Figure. 1 Activity Stage

Financial training is conducted to assist partners in managing and making good financial reports. It is expected that partners can measure how much total sales turnover and profits are earned each month. Financial reports are also expected to be a trigger for partners in developing business strategies. In addition to training, assistance is provided so that partners can be independent and do not have to depend on others. The business strategy will be divided into several strategies, namely: product development strategy, marketing strategy, and information technology implementation strategy. The resulting output is the partner's Financial Report.

Mentoring is carried out for one month to ensure partners can manage and make their financial reports. Grabah Product Diversification Training. Product diversification training and development aims to solve the problems of partners constrained by the lack of grabah products. Product diversification will focus on the types of goods in high demand and have a large enough market, such as clay souvenir blinds and various utensils with attractive patterns and colors. The product diversification carried out is also balanced with an increase in color quality by using a compressor so that the resulting paint is smooth and even. The output produced is a diversified product of processed pottery: souvenirs, writing utensils, and home knick-knacks of various shapes and colors. The resulting product must have attractive packaging to increase consumer interest in buying.

Assistance is carried out for one month to ensure partners can create innovative products and have good economic value. The following preparation stage is the provision of facilities and equipment used for service activities. The equipment needed in the manufacture of an integrated E-commerce system is by the requirements obtained. Two users can access the system, namely user and admin. Users can access the features of editing user data, ordering products, and printing proof of payment. while the admin can access the product data input feature, manage transaction data, and print transaction recapitulation

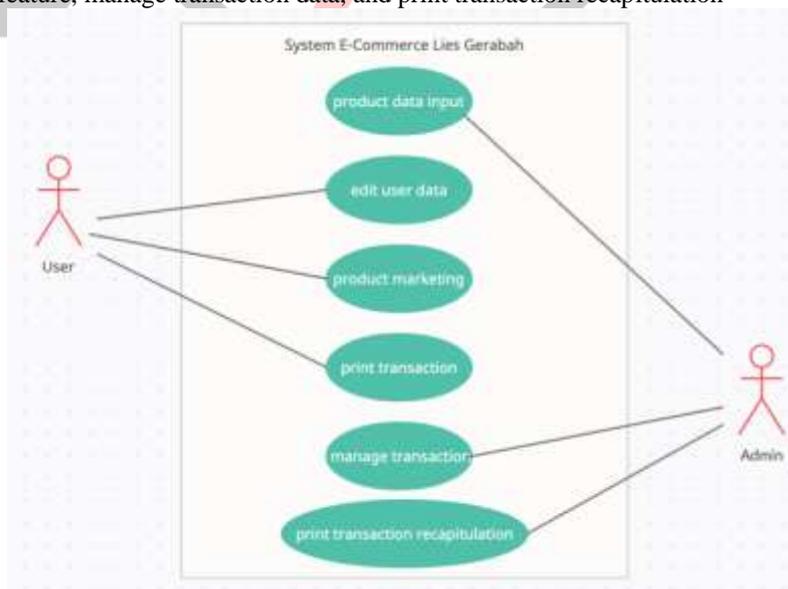


Fig 3. Usecase Diagram of E-Commerce System

The system prototype is made based on input from the user; if the user has approved the prototype made, the system development process will continue at the next stage. The software development method used is the prototype model. This model was chosen

because it is by the conditions and problems of partners who are still new to information technology so that if there are improvements, they can be handled immediately without the need to design from scratch [11]. The SDLC prototype stage starts from the initial requirements, and then there is an iterative process consisting of design, prototyping, customer evaluation, review, and updating. After the customer agrees, then proceed to the development, testing, and maintenance process.

The initial trial of the prototype is the testing phase by running several test cases that are carried out directly by the "Lies pottery" MSME management. The test results become a reference in revising the e-commerce system. System implementation is an activity that publishes a system that has been tested. Training on the use of the system is critical to ensure that partners can use the system that has been developed. Digital marketing assistance includes managing social media and marketplace accounts. Digital marketing assistance includes managing social media and marketplace accounts.

3. Post-Activity Stage

The post-activity stage consists of several stages of activities that focus on evaluating the implementation of service. In detail the stages of implementation can be seen in Figure 4.

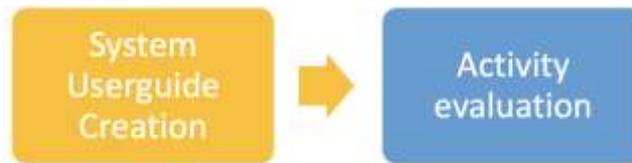


Fig 4. Post-Activity Stage

The manual is made to make it easier for partners to use the system that has been developed. There are two manuals, namely product improvisation manuals and system user manuals. The service evaluation stage is carried out to see if all the solutions given to partners have a good impact on the partner's economy.

IV. RESULT AND DISCUSSIONS

Based on the observations and implementation of the e-commerce system, a significant increase in soft skills was obtained. Increased partner soft skills in the form of increasing awareness in developing businesses, increasing the amount of diversification of products produced, and increasing partners' ability in marketing products. Based on the evaluation results for 4 months, there was a significant improvement in Lies pottery partners.



Fig. 5 Graph of Increased Sales

Increased partner soft skills in terms of marketing increases this can be seen from the ability of partners to use the e-commerce system. Based on the marketing results for 4 months, the average sales turnover of partner members increased from 3 million per month to 10 million per month. The E-C system was developed using the prototype live cycle development software. With the prototype user method in this case the partners can provide input to the developed system. When developing the system, it was done 2 times to improve the prototype. features that get improvements are payment features and product management features. Based on input from the user the payment feature only accommodates proof of payment so partners can check whether the payment has been made correctly. Product management features have also improved, that is, each partner can enter criteria and a large number of photos to convince consumers to buy partner products. E-Commerce System display can be seen in Fig. 7



Fig. 7 Implementation E-Commerce System

## V. CONCLUSIONS

Based on the dedication activities that have been carried out, there has been an increase in income and skills obtained by "Lies pottery". Increased partner skills regarding product standardization and cooperative management using the E-Commerce System. The income of "Lele Pantura" has increased significantly with the support of the cooperative "Lies pottery". Product standardization and the use of technology assist partners in managing and marketing their products.

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