Service Provider Information System in Technopreneurship Learning for MSMEs

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Abstract. This study aims to involve students in Technopreneurship courses by utilizing the e-marketplace as a marketing, sales and service medium for Micro, Small and Medium Enterprises (MSMEs). Where previously the lecture material was given in class in theory, amended by giving field practice assignments in collaboration with material entrepreneurs and building service providers as MSMEs in the City of Tangerang. Based on the results of research that the application of information technology, especially e-marketplaces in learning Technopreneurship has a real impact on the ability and level of understanding of students about Technopreneurship courses, students gain experience and insight about Technopreneurship, can design and test prototypes of service provider information systems (SijasPro) eMarketplace, students directly involved in helping solve the problems of business people, especially in the field of promotion and sales to customers. Sijaspro is able to produce promotional media that can be used directly by business people. Students are expected to have insight to foster entrepreneurial spirit among students, this is one of the new breakthrough strategies to anticipate the problem of increasing intellectual unemployment.

1. Introduction

In 2018, the number of internet users in Indonesia reached 264,161,600 people. That number increased compared to the previous year, namely in 2017 which reached 143.26 million people. The data is the result of a survey conducted by the Indonesian Internet Service Providers Association (APJII) conducted on 9 March-14 April 2019. The number of internet users in 2018 includes 64.8 percent of Indonesia's total population of 264 million people, this figure is predicted to continue to grow. This is due to the increasingly affordable price of smartphones, growth in the number of middle class families, and telecommunications companies that compete to improve the quality of internet networks to areas outside major cities in Indonesia [1].

Internet users in Indonesia are increasing every year, making business opportunities very good for some parties who are able to capture business opportunities by creating a marketplace that is part of e-commerce[5,6]. The rapid progress of technology has resulted in many emerging e-commerce as a place to buy and sell goods online that are used by entrepreneurs. This opportunity was not missed by MSMEs, where the marketplace for MSMEs was utilized by small and medium business owners. Because so far the obstacles that are always faced by MSMEs are marketing problems, especially for MSMEs in the regions, with their e-marketplace their market share will be wider and promotions will be much cheaper[5,6,7]. Figure 1 shows statistical data on internet usage in 2018.
Figure 1. Statistics on Internet Users in Indonesia in 2018

Micro, small and medium enterprises (MSMEs) are the largest group of economic actors in the Indonesian economy, MSMEs are very dominant in the quantity of business and employment, but judging by the value of the output it turns out to be very small, compared to the total value of the output of the industrial sector. According to previous research [2,8,9] states that the obstacles that are often encountered by MSME-class business actors are capital problems, business management, product quality standards, difficulties in market penetration and promotion, difficulties in distribution of goods, and the use of Computer Information Technology that is not yet optimal. Whereas today technological developments are experiencing very rapid progress, one of which is the internet facility for conducting online buying and selling transactions known as e-marketplaces.

Unemployment is one of the challenges in the development of Indonesia where unemployment is dominated by Vocational High School and tertiary graduates with a range of numbers above 7 million people [3,9]. One way to overcome unemployment, especially in tertiary institutions, is by requiring entrepreneurship courses in each study program theoretically and practically. The university is responsible for educating and providing entrepreneurial skills from the start on college and motivating graduates to choose entrepreneurship as their career and has the intention to start a business and have readiness in terms of entrepreneurial knowledge. In encouraging students to become entrepreneurs, it has already begun to be carried out in various universities. One of them is by adding learning (entrepreneurship) as a compulsory subject in every study program for students that aims to foster knowledge that entrepreneurship must have strong principles and confidence, in the delivery of material by lecturers not only limited to theory but students are directly involved in practice in the field with collaboration with entrepreneurs. especially for colleges based on computer technology, students are involved in creating an emarketplace framework, promotion and product sales. Entrepreneurship courses aim to produce entrepreneurial graduates in the field of informatics and others who are able to compete globally, also encourage the intention of technology-based entrepreneurship (technopreneurship). Especially with the development of communication technology, the dissemination of information is also very rapid, the development of business information in the field of information and communication technology also develops very rapidly[10]. The purpose of this research applying students in theory and practice in Technopreneurship courses by utilizing the Sijaspro emarketplace as a marketing, sales and collaboration media of students with material entrepreneurs and building service providers as MSMEs in Tangerang City.

2. Method

2.1 Micro, small or medium businesses (MSMEs)

According to Law No. 20 of 2008 defines micro, small and medium enterprises (MSMEs) is a general term in the economic realm that refers to productive economic businesses owned by individuals and business entities. Included in the criteria for a micro business is a business that has a net worth of IDR 50,000,000, not including buildings and business premises. The annual sale of micro businesses is a maximum of Rp. 300,000,000. - Small business is a productive economic business that stands alone,
either owned by individuals or groups and not as a business entity branch of the main company. Mastered and owned as well as being a part both directly and indirectly from medium businesses. Included in the criteria of a small business is a business that has a net worth of IDR 50,000,000, with a maximum of IDR 500,000,000 needed. The sale of business every year is between Rp. 300,000,000 and up to Rp. 2,5,000,000,000. While medium-sized businesses are businesses in the productive economy and are not branches or subsidiaries of a central company and are a part of directly or indirectly a small business or large business with a total net worth in accordance with the laws and regulations. Medium-sized businesses are often categorized as big businesses with criteria of net worth owned by business owners reaching more than Rp. 500,000,000 - up to Rp. 10,000,000,000, and do not include buildings and land of business premises. Annual sales results reached Rp2.5 billion to Rp50 billion [2,4]

2.2 eMarketPlace

eMarketPlace is an eBusiness model that deals with sellers and buyers in conducting business activities and internet-based or internet-based online media transactions. Buyers can find suppliers / sellers, service providers with the desired criteria, so that they get according to the market price that they want. As for suppliers / sellers, service providers can find out customers or companies that need their products / services.

2.3 Technopreneurship Learning

The Directorate of Higher Education and Personnel Development, the Directorate General of Higher Education, Ministry of Education, means that learning is the heart of the education process in an educational institution. In a broad context, entrepreneurship learning is education that teaches people to be able to create their own business activities. Education is pursued by building faith, soul and spirit, building and developing mental attitude and entrepreneurial character, developing thinking power and ways of entrepreneurship. Entrepreneurship is the enthusiasm, attitude, behavior, and ability of someone in handling the business and or activities that lead on efforts to find, create, implement new ways of working, technology, and production by increasing efficiency in order to provide better services and or obtain greater profits. Entrepreneur is a person who wants to be free, independent, regulate his own life, and does not depend on the mercy of others. They want to make their own money. Money is obtained from their own strengths and efforts. They must create something completely new or add value to something that has value to sell or give or is worth buying so as to make money for himself and even for those around him. Thus it can be concluded that entrepreneurship or also known as entrepreneurship is the process of identifying, developing, and bringing vision into real life, the vision can be in the form of innovative ideas, opportunities, better ways of doing something that is desired. The final result of the process is the creation of businesses formed under conditions of risk or uncertainty in the actions taken. While entrepreneurship leads to people doing business by optimizing their abilities.

3. Results and Discussion

3.1 Utilization of Information Technology

The use of information technology in running a business or often known as e-marketplace for small and medium-sized companies can provide flexibility in promotion and sales, enable the delivery of material to customers faster, send and receive offers quickly and economically, and support fast transactions without paper. the use of the SiJaspro emarketplace as a marketing, sales and service media for Micro, Small and Medium Enterprises and students can be translated into several points as follows:

- Communication: The internet is used as a medium of communication between students, students and buyers
- Promotion: The internet is used as a means of promotion of services or materials offered by MSMEs and students
- Research: MSMEs can use the internet for research in order to find out how far the benefits of their products are compared to other similar products that already exist. The research function here
can also be used to look for new formulas / strengthen the quality of products or services and to find out what is being done by competitors with similar products. With the assistance of students in entering data, promotions and surveys.

The Solution to Optimizing Utilization of ICT Based on eMarketPlace at MSMEs. As is well known, one of the factors that hinders the MSME sector is the problem in the use of information technology. To overcome these obstacles, there are several efforts aimed at developing and empowering MSMEs, including:

- Network development;
- Utilization and development of the Intellectual Capital of Technology (ICT);
- Capacity building / cooperative development;
- Development of technology and business incubators, including revitalization and utilization of central / regional government R&D facilities as well as through public, private, tertiary and community partnerships;
- Developing MSME centers to become dynamic MSME clusters;
- Provision of infrastructure by utilizing appropriate technology to crafters and production centers that have the potential to be developed into industrial clusters.
- Involving students in making and developing IT technology and coordinating with UMKs.

3.2 The development of Technopreneurship courses

The focus of developing technology-based entrepreneurship education is creativity and innovation. Technology creativity creates perspectives / ideas / new ideas / effective and efficient methods that are directly related to the process of improvement in the development of knowledge based economy. Creativity is an important aspect in the development of multidisciplinary research in theory and practice. Innovation is an implementation of creativity. Technological innovation is directly related to thinking, applying and creating technology in solving various problems.

In building an information technology-based business ecosystem involving students who take Technopreneurship courses by utilizing the SiJaspro emarketplace as a marketing, sales and service medium for Micro, Small and Medium Enterprises (MSMEs). Where previously the lecture material was given in class in theory, amended by giving practical work assignments in collaboration with material entrepreneurs and building service providers as MSMEs in the City of Tangerang, in organizing workshops that are useful for improving and introducing technopreneurship in various walks of life can be seen in the table 1.

**Table 1. Materials for Technopreneurship courses.**

| No | Subject                          | Lesson                                                                 | Competence                                                                                           |
|----|----------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1  | Introduction to Technopreneurship| 1. Definition of Technopreneurship<br>2. Supply chain economic<br>3. Building an entrepreneurial mentality | Participants are expected to be able to think innovatively and have insight, knowledge in responding to economic challenges going forward so that they can become more competitive. |
|    |                                  |                                                                        |-----------------------------------------------------------------------------------------------------|
| 2  | Product Design & Concepts        | Techniques gather consumer needs and how to measure them.             | Participants are expected to be able to understand and analyze market needs.                        |
| 3  | Creativity and innovation        | 1. The relationship between creativity and innovation on entrepreneurship<br>2. Techniques for generating ideas of creativity | Participants can understand techniques on how to generate new product ideas according to market needs |
| 4 | eCommerce | 1. Definition, process and perspective of e-commerce.  
|   |          | 2. Impact and success factors of e-commerce on the academic and business world.  
|   |          | 3. Marketing strategies in e-commerce.  
|   |          | Participants are able to apply business plans by utilizing marketing strategies in e-commerce so that in the future efficiency can be obtained in various aspects of management.  

### 3.3 Implementation phase

The implementation phase involves students in Technopreneurship courses by utilizing the SiJasPro emarketplace as a marketing, sales and service medium for Micro, Small and Medium Enterprises (MSMEs). The SiJasPro application has several menu displays such as displaying DasBoard for the latest products, best-selling products, material delivery services as seen in figure 2.

![Figure 2. SiJasPro DashBoard Menu](image-url)
Transaction management page is a page that is used to manage customer transactions in ordering the materials and services they want, in making an order, customers can order more than two orders and provide customer data related to the location of work, the area worked on, time of work and description in detail. Job details including job sketches. Customers can consult with the system via chat, email and message boxes on the web, as seen in figure 3.

4. Conclusion

Academics, as agents of development and diffusion of superior research-based innovation and technology, are responsible for disseminating technology-based entrepreneurship education broadly. Diffusion of technology and technopreneurship education will be able to increase the potential effects of the growth of innovative-technological startup. The emphasis of technopreneurship education is creativity and the ability to innovate continuously. In addition, universities can be directly involved in building technology incubators or collaborating with other stakeholders in creating technology-based business ecosystems. Technology-based business incubators will be able to accelerate the commercialization of the results of innovations or inventions generated from university research.
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