DEVELOPMENT OF STUDENTS BASED ENTREPRENEURS WEB AND MOBILE TECHNOLOGY

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ABSTRACT

This study aims to describe the technology based entrepreneurial activity, to elaborate the efforts to improve students' and graduates interest to be the doers of technopreneurship, and to compile a document which will be the direction of development to lead technopreneurship in at STMIK Royal in particular and Asahan District as a whole. This study used qualitative approach, the data collected by observation, interview, questionnaire and documentation, that located in 2 districts in the Province of Asahan. This study concludes that, low competitiveness of the product by small and medium business in Kabupaten Asahan is caused by limited technology mastery among entrepreneurs. If there are any technological innovations, it's temporally only for exhibition purpose in regional and national scale, not to enhance the quality of products, diversification and efficiency in short-term, as well as sustainable increased of production, their income increased, and or business extension profit in the long-term. Technopreneurship development that partnership by STMIK Royal - Asahan District is the best practice to extend and strengthen technopreneurs in the region. Students interest in entrepreneurship can be increased by research based learning and student centered learning.

INTRODUCTION

Indonesia's prolonged economic crisis has led to increasingly limited job opportunities, especially for college graduates. Open unemployment in Indonesia in 2016 amounted to 7.61 million people (6.32%) and 10% of them are scholars. The data supports the statement of the International Workers' Organization (ILO) that a part of the total unemployment of Indonesia is college graduates. This condition began to get worse with the enactment of the ASEAN Economic Community in 2015 which resulted in Indonesian tertiary graduates having to compete with overseas graduates, especially in the Southeast Asia region (Ministry of Trade Republic of Indonesia, 2015).

Entrepreneurial creation becomes an alternative solution to various problems in society such as poverty and social inequality, increasing unemployment of productive

age and depleting energy supply reserves, all of which require creative and innovative action. Higher education is also responsible for educating and preparing graduates and providing motivation so that they dare to choose entrepreneurship professionally. Tridharma which is carried out by academicians especially lecturers is teaching education, research, and community service should not only be oriented to produce superior workforce that is ready to use, competitive, and noble but more than that is the generation that is able to create new jobs through creative power and technological innovation while capturing market opportunities, the needs of the business world and the industrial world.

At present the most suitable entrepreneurial program that is used involves technology as its base with the hope that the creation of appropriate strategies and innovations can later place technology as one of the factors for national economic development and this entrepreneurial program is often referred to as technopreneurship namely an entrepreneurial program that combines the technology and entrepreneurship.

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Seeing this, it is endeavored to make proposals to develop entrepreneurship programs conducted by students. Analysis of this program will also be supported by an application that utilizes web and mobile technology that is easy to understand and in accordance with the concept of technopreneurship. Based on the background of the problem above, several problem formulas are described, namely: (1) How is the student entrepreneurship program currently running? (2) How do you design and create web-based and mobile student entrepreneurship program applications? (3) Will the application being built later be able to create graduates who are able to create new jobs?

The scope of the discussion in this research is to raise the discussion regarding the development of STMIK Royal student entrepreneurship programs using web and mobile technology.

In this study there are several objectives to be achieved, among others: (1) Designing an application of web-based and mobile student entrepreneurship programs.

(2) Analyzing more detailed student entrepreneurship programs so that they can provide more complete data for making applications (3) Knowing the extent to which the efficiency and effectiveness of applications will be made.

The results of this study will be beneficial (1) To develop the spirit of technopreneurship among STMIK Royal students. (2) Providing alternative solutions for STMIK Royal in facilitating entrepreneurship programs for students. (3) Creating new entrepreneurs both from students and the general public. This research will later be published in a national journal or also delivered orally in a national seminar.

Entrepreneurship

Understanding entrepreneurship in general is a process of doing something new or creative and different (innovative) that is useful in providing more value.

According to Drs. Joko Untoro (2018) that entrepreneurship is a courage to make efforts to meet the needs of life carried out by someone, on the basis of ability by utilizing all the potential possessed to produce something that is beneficial to himself and others [1].

In the book Entrepreneurial Finance by J. Leach, Ronald Melicher (2020) that entrepreneurship is a process of turning ideas into commercial opportunities and creating value (prices). "Process of changing ideas into commercial opportunities and creating value" [2].

In the book Entrepreneurship: Determinant and Policy in European-US Comparison (2018) that entrepreneurship is the process of perceiving, creating, and pursuing economic opportunities "the process of perceiving, creating, and pursuing economic opportunities". But said in the book, that the process of entrepreneurship itself is difficult to measure [3].

According to Mr. Eddy Soeryanto Soegoto (2019) that entrepreneurship or entrepreneurship is a creative business that is built based on innovation to produce something new, has added value, provides benefits, creates jobs and the results are useful for others [4].

Technopreneurships

Technopreneurship comes from a combination of the words "technology" and "entrepreneurship" [5]. Technopreneurship is a process of synergy of strong abilities in the mastery of technology and a thorough understanding of the concept of entrepreneurship[6]. Sudarsih in the Proceedings of KNIT RAMP-IPB argued that technopreneurship is a process and the formation of new businesses involving technology as its basis with the hope that the creation of appropriate strategies and innovations could one day place technology as a factor for national economic development [7]. Another opinion states that technopreneurship is a process in an organization that prioritizes innovation and continuously discovers the organization's main problems, solves its problems, and implements ways of solving problems in order to increase competitiveness in the global market.[8].

In the concept of technopreneurship, the basis of entrepreneurial development starts from the invention and innovation in the field of technology that is not just high-

tech but the application of knowledge in the work of people (human work) such as the application of accounting, economic order quantity, marketing orally and online.

Technopreneur is a new age entrepreneur (new age) who is interested in technology, creative, innovative, dynamic, dare to be different and take a path that has not been explored and is very passionate about his work. Technopreneur combines technology and the market, ultimately boils down to business. They start a business based on technological innovation, must have a number of supporters including a strong desire to pursue achievement, conceptual ability and high problem solving power, have insight and a broad mindset, high confidence, tolerant, dare to take risks, realistic, have interpersonal skills, and controlling emotions.

Web Based Application

Web-based application or also called web base, is a type of application based on web browser technology. That is, this application runs if there is a browser and internet connection. Web-based applications have the following characteristics: 1) Web-based applications do not require installation because accessing them only requires a browser or browser and internet network; 2) As long as there is a browser and internet network, web-based applications can be accessed easily on any operating system. Windows, MacOS, iOS, Android, Linux, or other operating systems as long as there is a browser and can be connected to the internet, then web applications can be accessed easily; 3) Because it can be accessed with various operating systems, web-based applications can be easily accessed through various devices such as desktop PCs, laptops, smartphones or tablets; 4) Web-based applications do not require too high a device specification. This is because the process is carried out on the web server providing the web application; 5) Because it utilizes internet network technology, web applications require a stable network. The goal is that the process of running the application is not interrupted and can run well; 6) Web applications require a good security system. Especially about the web application server provider. Do not let the server down, resulting in web-based applications can not run properly.

Mobile Based Application

As technology develops, when smartphone devices are popular, applications also develop in a new direction, namely mobile-based applications. This mobile based application is slightly different from web applications.

Mobile-based applications are generally intended for mobile devices such as smartphones. Because the shape of a smartphone is smaller than a desktop, then automatically display on a mobile application tailored to the needs of smartphone users, therefore the development of the application is also different.

The mobile based application itself is divided into two namely: 1) Mobile web based application. Mobile web based applications are generally the appearance of web applications in the form of mobile. So, to use this application users simply access the web browser on a smartphone device. Before the era of popular mobile, there used to be many sites that if displayed on a mobile device would appear like a web display on a desktop. However, now there are many web-based applications that can customize the

appearance of the web depending on the device used. This is commonly referred to as a mobile friendly website display; 2) Native apps. Native apps is a term for mobile applications that functions a little like desktop applications, where users need to install the application first before using it. Native apps are usually distributed or distributed in application stores such as Google Play for Android or Apple Store for iOS. To use this application, there is an application usage approval process. For example, allowing applications to access certain functions on a smartphone. There is even an application that asks for permission to allow access to read phone contact data and device IDs.

METHOD

This type of research is a case study that uses a descriptive qualitative approach by collecting and describing data that is already available on the object to be studied. All activities or events proceed as they are, the researcher does not manipulate or provide certain treatments to the object of research.

In the case study the researcher tries to describe the research subject in the whole behavior, namely the behavior itself and the things that surround it. The advantage of case studies is that they can find out in depth about the influential factors / entrepreneurial learning resources.

Data collection through observation, interviews and documentation. Research for 6 months from April to October 2017 is located in STMIK Royal and the city of Kisaran. Primary data sources were obtained from micro, small and medium businesses in Kisaran, prospective entrepreneurial students and alumni who have pioneered business. Secondary data comes from the Central Statistics Agency (BPS) of Asahan district. All verbal, written, numerical (numeric / quantitative) or non-numeric (attribute / qualitative) information is valuable input in the analysis.

College graduates who become informants in this study are categorized as follows: 1) still unemployed, both classified as open unemployment and disguised unemployment and still hoping and trying to find work in the formal sector, 2) do not have or run a business / business but passionate, interested, and actively seeking entrepreneurial opportunities, 3) already owning, running and or engaging in a business / business, both technology-based (technopreneurship) or conventional (non-technopreneurship).

We have carried out socialization and research activities related to technology-based new entrepreneurial development efforts at STMIK Royal in the past year where we integrated research-based learning (RBL) and student-centered learning (SCL). RBL and SCL direct students to explore their interests and abilities independently so as to grow understanding and motivation of entrepreneurship and the ability to write good business proposals (business planning). Students learn entrepreneurship based on theory and empirical evidence in the field (contextual teaching learning) so that they are increasingly interested in entrepreneurship, opening jobs and creating income and prosperity for themselves and the community in their environment.

The current student entrepreneurship program is a culinary entrepreneurship which is a food and beverage business that provides delivery order services (between orders) to buyers / customers by using an application that can be downloaded at Playstore namely WeJek Indonesia.

There are several stages carried out in this Student Entrepreneurial Program, including: 1) Business planning stage. At this stage students are guided to be able to plan the types of businesses that will be made; 2) Training phase. At this stage students are trained to design the look of their business on mobile applications; 3) Stage of capital distribution. At this stage students are given business capital; 4. Mentoring stage. At this stage students run their business accompanied by lecturers.

RESULT AND DISCUSSION

System Implementation

In the implementation of this system will display the implementation of the interface design which is divided into three parts : 1) Implementation of the user interface (restaurant / cafe); 2) Implementation of the driver / courier interface; 3) Implementation of the administrator web interface.

System Requirements

This mobile application was created using several software including : 1) Android Studio and Android Emulator Genymotion for making mobile applications (on Android smartphones); 2) Macromedia Dreamweaver and Xampp for making front-end and back-end applications for Web Administrators (on computers); 3) To run this application, several components are needed, including : 1) Domain. Domain is the unique name of a website where the domain name of this application is: www.wejekindonesia.com; 2). Hosting. Hosting is a place to store all data from the website and delivery order application obtained from IndoWebsite; 3) Google Playstore Developer Account. By registering as a Google Play developer, this delivery order application can be uploaded to PlayStore so that later it can be downloaded for free by everyone.

Interface For Customers / Buyers

This interface contains a display for the user to use a food delivery application that is We Food where the user can choose a restaurant / cafe then order and buy food / drinks from the restaurant / cafe he wants.
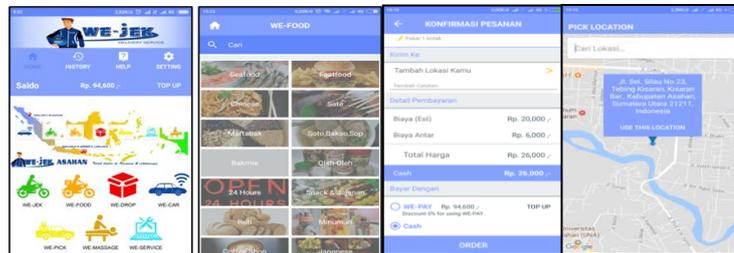
Image 1. Interface For Customers / Buyers

Interface For Drivers / Couriers
This interface is useful for drivers / couriers in delivering food from restaurants / cafes to users (customers / buyers).
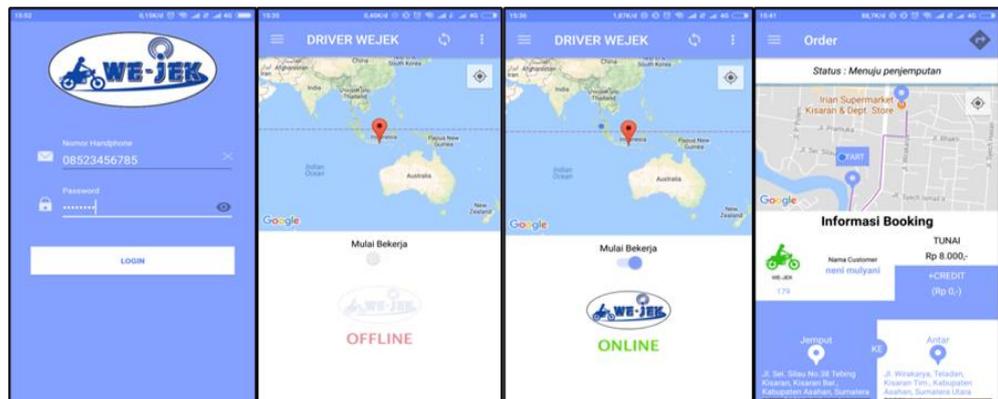

Image 2. Interface For Drivers / Couriers

Interface for Web Administrators
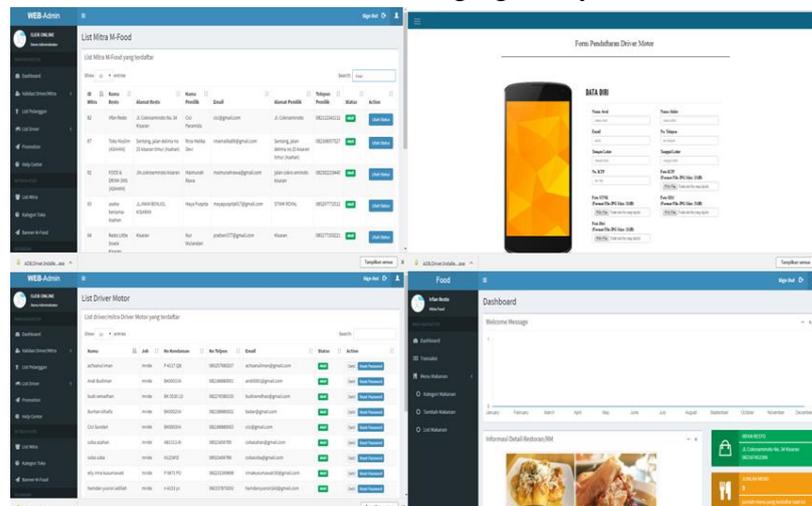This interface is useful for the admin in managing the system as a whole.

Image 3. Interface for Web Administrators

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CONCLUSION

There are several conclusions obtained from this study, including: 1) One of the causes of the low interest of students in entrepreneurship is due to the still low role of lecturers to guide students in applying technology to run their businesses; 2) Web and Mobile Technology Student Entrepreneurship Program is a best practice to expand and strengthen superior technopreneur in higher education. The innovations implemented are quite effective in increasing student income, opening new markets for products produced by students and reducing unemployment for college graduates; 3) Student interest in becoming innovative entrepreneurs (technopreneur) can be increased through research based learning and student centered learning. RBL and SCL direct students to explore their interests and abilities independently so as to grow understanding and motivation of entrepreneurship and the ability to write good business proposals (business plans).

Some suggestions given to the results of this study include: 1) Higher education should always facilitate programs aimed at increasing the creativity potential of students by utilizing existing technology; 2) Students must always renew their mindset into a vision for the future to get a better future for themselves;

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