Development of E-Commerce Systems as a Learning Media for Entrepreneurial Education

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INTISARI

Penelitian ini dilakukan di SMK N 2 Padang yang bertujuan untuk melakukan penerapan sistem e-commerce sebagai media pembelajaran pendidikan kewirausahaan guna meningkatkan potensi peserta didik dalam berwirausaha sesuai bidang keahlian yang dipilih. Serta mempersiapkan peserta didik untuk bersaing dalam dunia kerja dan dapat membuka lapangan kerja sendiri dengan memanfaatkan teknologi berupa jaringan internet. Populasi dalam penelitian ini adalah siswa kelas XI berjumlah 50 orang. Teknik pengumpulan data yang digunakan adalah metode angket/kuesioner. Metode yang digunakan dalam penelitian ini adalah Research & Development (Metode Pengembangan) dengan model waterfall. Model ini terdiri dari beberapa tahapan diantaranya tahap perencanaan, tahap analisis kebutuhan software, tahap perancangan software, tahap implementasi dan tahap pemeliharaan. Berdasarkan penelitian yang dilakukan, SMK N 2 Padang menyetujui keberadaan sistem e-commerce ini sebagai media pembelajaran pendidikan kewirausahaan di sekolah. Mengingat kemajuan teknologi saat ini, e-commerce merupakan salah satu cara yang harus dilakukan dalam dunia kerja khususnya di dunia bisnis. Selain itu, e-commerce juga membantu mengembangkan digital entrepreneurship di dunia pendidikan khususnya pendidikan vokasi di sekolah kejuruan.

Kata kunci: e-commerce, media pembelajaran, potensi, pendidikan kewirausahaan

ABSTRACT

This research was conducted at SMK N 2 Padang, which aims to implement an e-commerce system as a learning medium for entrepreneurship education to increase students' potential in entrepreneurship according to the chosen field of expertise. As well as preparing students to compete in the world of work and open their jobs by utilizing technology in the form of internet networks. The population in this study was 50 students of class XI. The data collection technique used is a questionnaire/questionnaire method. The method used in this research is Research & Development (Development Method) with the waterfall model. This model consists of the planning stage, software requirements analysis stage, software design stage, implementation stage, and maintenance stage. Based on the research conducted, SMK N 2 Padang approved the existence of this e-commerce system as a medium for learning entrepreneurship education in schools. Given the current advances in technology, e-commerce is one way to be done in the world of work, especially in the business world. In addition, e-commerce also helps develop digital entrepreneurship in the world of education, especially vocational education in vocational schools.

Keywords: e-commerce, instructional media, potential, entrepreneurship education

INTRODUCTION

Vocational high schools (SMK) in Indonesia have different areas of expertise. The field of knowledge is a collection of several expertise programs consisting of several skill competencies[1]. Every individual has different abilities. For that, students can choose a Vocational High School (SMK) with a field of expertise according to their abilities [2].

In the learning process at SMK, entrepreneurship education has an essential role in every skill program. With entrepreneurship education, students can train mental readiness to compete and get involved directly in work. As well as opening their business fields by current technological advances[3].

Current technological developments are causing everything to be done online, be it communication, teaching and learning, and business [4]. One of the current technological developments in online buying and selling activity is called e-commerce. E-commerce can be a learning medium in entrepreneurship education subjects[5]. Previously, students were not very familiar with product marketing through the internet/online network[6].

With this e-commerce system, students can understand the entrepreneurial process carried out through the internet network, whether the marketing process or the transaction process[7]. Every expertise program in SMK Negeri 2 Padang should be equipped with knowledge about e-commerce. So that later the abilities possessed by students can be developed into a business field by utilizing the internet network. This causes the unemployment rate to decrease[8].

For this reason, in the learning process, teachers are expected to improve the abilities possessed by students, be able to train students' mental readiness to enter the world of work, and be able to prepare students as productive, creative, and innovative entrepreneurs according to current technological advances[9][10].

METHOD

The type of research used in this research is Research & Development (R&D) or development research. This research aims to find, develop and validate a product. Development means deepening and expanding existing knowledge and products[5][11].

The research subject is SMK N 2 Padang. The population in this study was 50 students of class XI. Sampling was done by using a questionnaire distribution technique.

The development model used is the waterfall development model. This model is a systematic or sequential and sequential information system development model[10]. The waterfall development model has several stages, namely the planning stage to determine software requirements[12]. This analysis stage explains the system-related picture, the design stage in the system, the implementation stage, and the maintenance stage. The following is the flow of these stages:
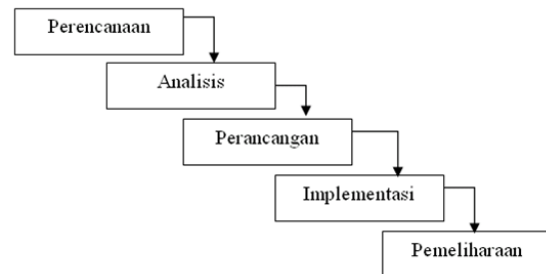

Figure 1. Waterfall Model[13]

RESULTS AND DISCUSSION

This system provides several menus, including the home menu, shop, offer transaction form, register/login form, and contact. And there is a menu that is used to store and collect products that will be disordered before making a transaction.

Needs Analysis

This stage is carried out to determine the requirements needed by software, such as a framework. In this system, the framework used is the Yii2 Framework. The Database Management System used in this system uses the MySQL application.

Software Design

The software design in this study consisted of:

Use Case Diagram

The use case diagram proposed in the system can be seen in Figure 2, where the actors of this system consist of admins, producers (sellers), and consumers (buyers).
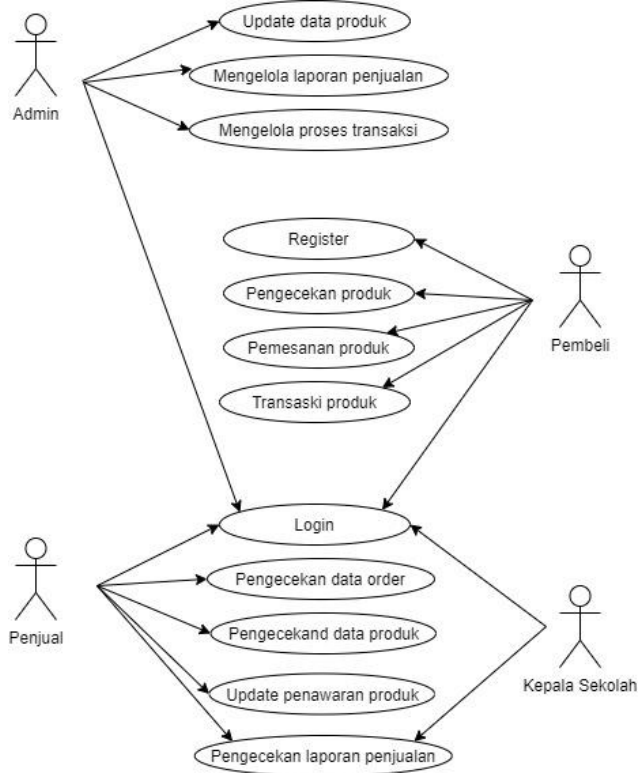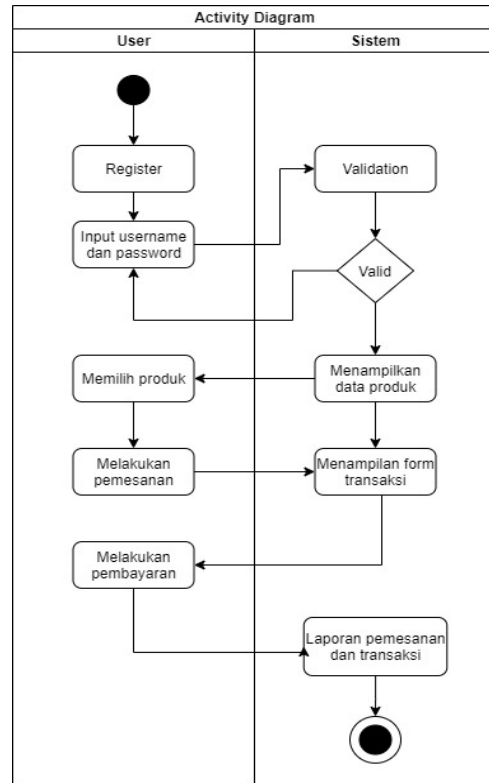
Figure 2. Use Case Diagram

Database Design (ERD / Entity Relationship Diagram)

ERD is a conceptual data modeling in developing a rational database[14]. ERD design can assist the database creation process of this e-commerce system[15]. The following is a picture of the ERD design on this system:
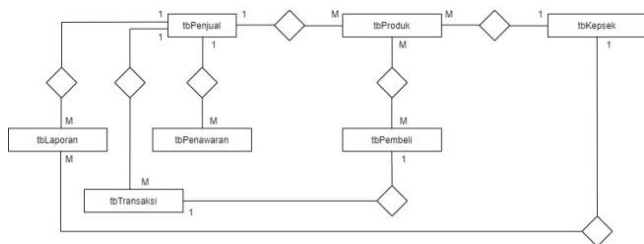

**Figure 3**. Entity Relationship Diagram

Activity Diagram

Activity diagrams depict the workflow or activities of a system or business process contained in the software (Sukamto. Salahuddin, 2014). The following is the activity diagram of the e-commerce system:

Figure 4. Activity Diagram

Implementation

Main Page Display

This system uses UI templates to help display the e-commerce system that provides the following menus:
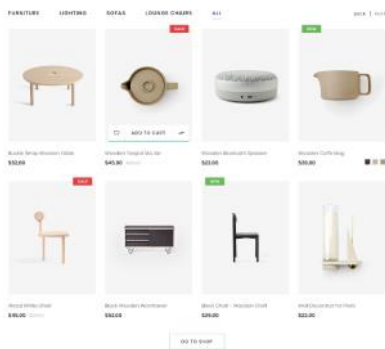

https://pngtree.com/
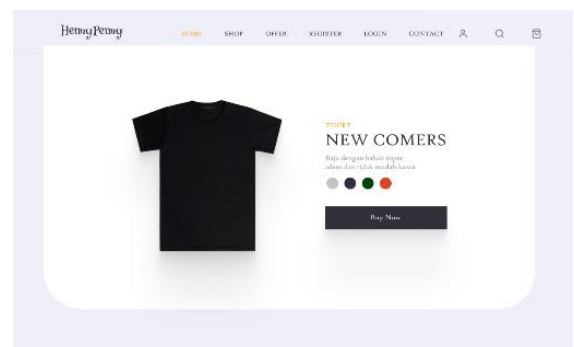
Figure 5. Main page

Shop Menu

The shop menu in this system provides a list of products offered. In this menu, the user can place an order for the desired outcome.

https://pngtree.com/

Figure 6. Shop Menu

Offer menu

On this menu, the system provides offers related to the products offered, such as discounts and other promos,

Transaction Form

After the user orders the product, the user can make transactions for the product type.

Figure 7. Transaction Form

Form Register/Login

The user must first register to be able to log in to this system. After logging in, the user can view, place orders and carry out the transaction process of the products provided.

Figure 8. Form Register/Login

CONCLUSION

Based on the research conducted, SMK N 2 Padang approved the existence of this e-commerce system as a medium for learning entrepreneurship education in schools. Given the current advances in technology, e-commerce is one way to be done in the world of work, especially in the business world. In addition, e-commerce also helps develop digital entrepreneurship in the world of education, especially vocational education in vocational schools. For this reason, it is necessary to introduce students who will enter and compete in the world of work. Even with this system, it is hoped that students can create their jobs.

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