DEVELOPMENT OF UX ORBIT DESIGN ONLINE COURSES PLATFORM IN THE FIELD OF USER INTERFACE (UI) AND USER EXPERIENCE (UX)

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Abstract

The purpose of this research is to provide a User Interface (UI) and User Experience (UX) learning solution for the community so that the distribution of good quality learning content can be properly and easily conveyed to the public. To achieve this goal, an online course platform that specifically focuses on the UI and UX fields which meets community's preferences was created. It addresses problems such as issues in finding learning resources and mentors, as well as the lack of distribution of good quality learning content. This research used prototyping model from analysing the existing system until developing a prototype system. The created online course platform is expected to help people, both technophiles and non-technophiles to increase their knowledge and abilities, especially in the fields of UI and UX.

Keywords: Course, Platform, User experience, User interface.

1. Introduction

Online courses are gaining great demand by Indonesians, especially students and practitioners. It is due to easy internet access, flexible study time, and affordable prices. There are many online class categories ranging from the development of soft skills to technical skills learning content [1]. With so many online courses that provide various class categories, it makes confusion among people regarding the classes and field that they wanted to choose. Judging from the current job requirements, people are obliged to be able to develop themselves and master one particular competency area. It is believed that it made them got a bigger opportunity in getting a job.

One of the popular competences is the User Interface (UI) / User Experience (UX) skillset. In addition, UI skillset is the interface design competency that meets user requirements and preferences. This area of work includes the interface design for software, home appliances, mobile devices, and other electronic devices. The interface is a display of a digital device so that it can be seen visually by the user. This visualization is the main key to the UI. Meanwhile, UX design is the process of making a digital product easy for users to use. It seeks to create comfortable experience for users when using the digital products. This UX design has a wider scope, starting from researching the users of a product, their behaviour when using it, their needs, and their goals. UX is closely related to the way the product solves the problems faced by users [2-4].

The development of UI/UX in the world has increased, because the world companies, especially those engaged in technology, are starting to realize that the UI/UX sector greatly affects company revenues. As many as 35% of companies lost their revenue because they did not invest in UI/UX. That is why technology companies such as Facebook, Google, Apple, and other institutions are investing more in the UI/UX field. The UI/UX is a prominent factor for companies to attract more users to continue using their products. The UI/UX is very important in providing services to each user in order to get acceptance from the construction of a system [5-8]. Indonesia has also started to develop the UI/UX field and continues the improvement along with technological developments in the current era. We conducted a survey on small group of 30 public respondents by distributing questionnaire. The results showed that 84.2% of the respondents were very interested in the UI/UX field. However, many of the respondents still find difficulties in finding the reliable learning sources, Indonesian language content, and the mentors in the UI/UX field. It proves that the UI/UX plays important roles in providing good value of task usability [9]. Several studies on UI/UX stated that it did not only focus on the e-Learning perspective but also from learning education management perspective. A study concluded that the delivery of e-Learning requires the principles of User Interface Design (UID) so that it can motivate learners and increase time efficiency in using an e-Learning tool [10]. However, it should be noted that the application of e-Learning materials must refer to the existing learning management system standards [11].

Based on these problems, this research aims to build an online course platform that provides good quality learning resources in the UI / UX field, connects the community with UI/UX mentors that meets community's preferences, and facilitates the distribution of learning content in Indonesian language. The research used Prototype Model where it describes, explains, builds, and validates a problem faced by the community.

2. Research Method

This work used a prototype model with five phases (See Fig. 1.). The first one is identification phase using application interface design, user flow, and the extent to which the application is able to solve problems. This is modelled through the use of the Unified Modeling Language (UML) as a design analysis tool. The second phase is the prototype building phase that is tested on users. This prototype is an application interface design according to user needs. Website-based prototypes are built in order to get a universal platform on various user devices. After that, testing phase is carried out using the black box method to determine the success of system functionality. If there are any changes, the design must undergo the improvement phase. In the final phase, the prototype is developed as the final version after the user validation [12].

Fig. 1. Research method.

3. Results and Discussion

The built system design consists of several proposed procedures that refer to the running procedures at UX Orbit Design company. The ongoing procedures were analysed to improve the design of the proposed system and to make it an integrated system.

3.1. Use Case Diagram of Ongoing Business

In the system, a use case diagram of an ongoing business that has been used were based on Fig. 2. These use cases are related to the business model that is running in the company. This use case describes how a previous business model has been implemented in the company. A mentor manages all data that includes registration, payment, online classes, and financial reports. A member registers to the system and pays for the registration fee. A manager supervises the online classes and modules, as well as the reports submitted by the financial staff. The following is a business use case diagram description of the ongoing at UX Orbit Design company [13].
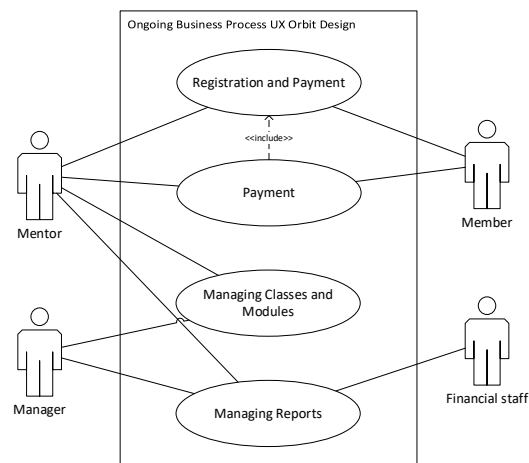

Fig. 2. Use case business of ongoing business.

Based on the evaluation of the business model, five problems were identified. The first one, problems related to users or the community: the difficulty of finding learning resources about UI/UX, especially for people who are already involved in this field. The second problem is the lack of distribution of learning content about UI/UX, especially those in Indonesia. The third problem is the difficulty in finding a mentor to learn UI/UX. The class and module management in the ongoing system is still inefficient and ineffective because data collection is not carried out in an integrated, structured, and continuous manner. Therefore, it creates difficulty in repairing or adding new material. The next problem is the delivery of modules, the classes that learn in the current system are very ineffective and inefficient. It is because the mentors have to send the modules to each member via email. The final problem is that the management of report data is still done manually. These activities contributes to the inefficient use of time. The evaluation results lead to the development of a web-based integrated UI / UX online course.

3.2. Implementation of the Proposed System

Figure 3 shows the use case diagram of the proposed system. The improvement was done using Unified Modeling Language (UML) by declaring a functional system [14, 15]. Specifically, there are five procedures in the proposed system which are fundamental activities in system implementation.
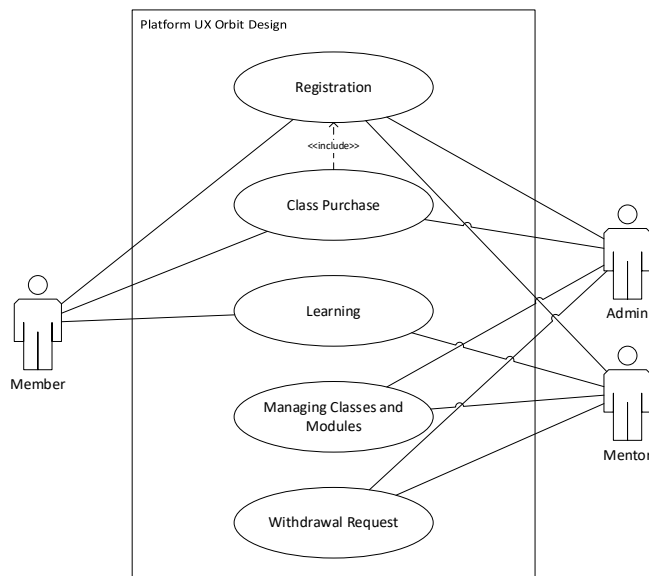

Fig. 3. Use case diagram of the proposed system.

The registration procedure states that prospective members have to fill out the registration input form. In filling out the input-form, if a prospective member enters an email that has been registered, the system informs the prospective member to use an email that has not been registered. After the complete and valid input form is submitted, the system saves the registration data and sends an activation link for the account registration via email. Prospective members then open the activation link to activate his/her account. In addition, the system

displays a login page with a message that the account has been successfully created. The newly registered member then fills in the login input form. Figure 4 shows the implementation of the registration page accessed by the member. The dashboard member is shown in Fig. 5.

Fig. 4. Implementation of registration.

Fig. 5. Implementation of dashboard member.

UX Orbit Design selects outstanding mentors who are chosen based on experience and abilities of the mentor. The system has two categories for mentors. The first one is called the company's internal mentor team, a mentor from UX Orbit Design. Whereas the mentors from outside of UX Orbit Design is categorized as external mentors. The UX Orbit Design provides guidance in .pdf format, for anyone to become a mentor. Mentors who are directly selected by UX Orbit Design have at least two years of experience in their field and are proven by certificates or portfolio results. Those

selected mentor is contacted by UX Orbit Design to discuss procedures for creating classes and profit-sharing. Upon verification, a mentor is given access rights or a mentor account so that he/she can directly access the mentor dashboard page to begin the class. The registration procedures for the mentor are similar to the member.

Next is the procedure for managing classes and modules. Before classes and modules can be accessed by any members, they should be managed first by mentors and admin. Mentors can create their own classes on behalf of himself, while the admin creates a class on behalf of UX Orbit Design. Mentors and admin access the dashboard to create a classroom, fill a class title, select a class level (beginner, intermediate, or advanced), fill class description, preview video, select a category created by the admin, as well as determine the prices and discount information. Module page provides facility to create sections, lessons, quizzes, and task submissions. For the class price, mentor can set it to be in the range of IDR 50,000 to 300,000. The revenue sharing system from class sales between UX Orbit Design and mentors is 40% for the mentor and 60% for UX Orbit Design. Then, the mentor uploads the image for the preview image and complete the class module with the video and other teaching material. Finally, the system saves those data in the database. If any input form is incomplete, the system gives a notification for the mentor. Free classes are not provided with the submission and certificate features. If a class is set as a free class, the price and discount price input form are left blank. Then the uploaded teaching material module can be in the form of video, text, or images that are made based on sections. For the provisions of the video material, the mentor first uploads the video on YouTube. Then, the video link is embedded on the website using the form provided. The mentor can create questions and the corresponding answers in the system. For each section, mentor can provide quiz at the end of the lesson. After the mentor has finished creating a new class, the class and module is then validated and checked by the admin. Only the class that meets the requirements is given a passed badge. If a class gets not-passed badge, the mentor should refine it. Only those classes with passed badges can be issued directly by the admin or mentors. The created class can be accessed perpetual. Classes can have a class coupon code for members to get a discount. The admin adds a coupon code to the class. The coupon code can be used to rebate the entire price so that the class is free. It is also made based on the manager's decision because there are certain events or certain days such as national education day. UX Orbit creates a coupon code by setting the discount up to 10 or 20%. Admin creates a coupon code, enters the code end date, and discounted price then selects a class. After that, the system saves the coupon code.

The next procedure is the class purchase procedure. The member selects the class catalogue menu when logged into the platform. Then, the system displays the class catalogue page which contains the available classes. The members select the premium class to be purchased and view class details. Apart from the premium class, members can also access free classes. Then, after members look at class details and class previews, members click the buy button. After the member is logged in, the system immediately displays a checkout page that contains detailed information about the purchase details which they can enter the class coupon code. If the entered coupon is invalid, expired, or has been used before, the system will tell the user that the coupon cannot be used. For the valid coupon code, the system displays the discounted price and automatically reduce the price.

The system then continues to display the information payment method, with price, discount, and total price information. If the member is not logged in, the member is

redirected to the login page. The member then pays through manual bank transfer and uploads the payment proof and input the name of the sender in the payment confirmation page. After confirmation is sent, the system saves the data and displays a message that the payment confirmation is successful. System notifies the member if any incomplete data is found. Admin verifies the payment and gives access to the member for the purchased class. The class is then labelled as "purchased". If it turns out that the payment confirmation is fake or has not been paid with proper amount, then the payment confirmation is rejected by the admin. Then, the system sends a message that the payment confirmation is cancelled with the label "unpaid" or "cancelled". Figures 6 and 7 show the page of class purchase and purchase history.

Fig. 6. Implementation of class purchase.

Fig. 7. Implementation of purchase history.

After payment confirmation, members are able to access classes that have been purchased (Procedure of Learning). The member can see the learning progress displayed by the system in the dashboard menu, then the member enters the class directly and then learning detail page. In the class learning page, members get a

learning module from the start to finish along with assignments and quizzes from the mentor. The system displays a submission page for members to send the assignments. Meanwhile, in quizzes, members are required to filling in the quiz in the form of multiple choices. If members do the quiz correctly with at least 60% correct points, the system displays the pass information. If the points are less than 60%, then the member has not passed the quiz and the system displays the information that they have not passed. Besides, members can also have discussions with mentors or with other members.

To create a discussion, members create a discussion room then enter title and description, the system then saves the data and displays the discussion per class. This discussion forum is private and can only be accessed by members who have enrolled to certain classes. The mentor can send feedbacks based on the class or discussion performance. If the assignment is complete and appropriate, the mentor send information that the assignment has been completed and has passed the submission. Finally, if the member has completed their class, they receive a certificate. To finish class, members press the check button on each class lesson. Lastly, if the class has been completed, members are required to fill out a review to provide a rating and comment on the class that has been completed. Implementation of learning pages, certificates, and feedbacks are shown in Figs. 8 to 10.
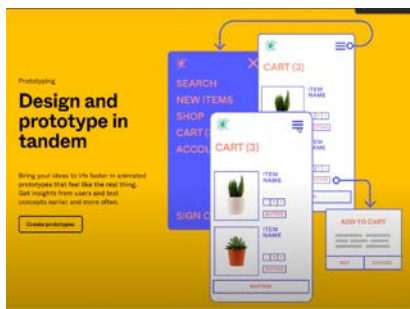

Fig. 8. Implementation of learning page.

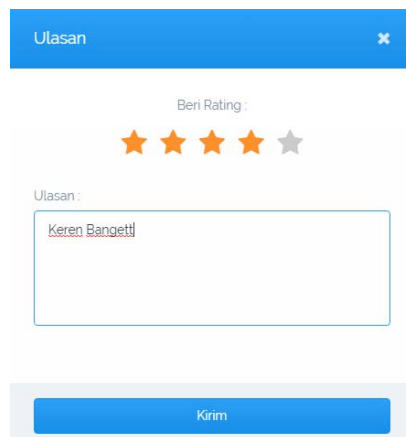**Fig. 9. Implementation of certificate.**

Fig. 10. Implementation of feedback.

The last procedure is withdrawal request, a request for money withdrawal was made by the mentor to the admin or UX Orbit Design in order to get their salary. The mentor accesses the withdrawal requests menu to see the total revenue. If there is a new member who buys the mentor's class, the withdrawal request page will display a list of purchases made by the member. The mentor can make a withdrawal with each class purchase, or the mentor can withdraw all at once. Then, the admin checks the withdrawal request menu from the mentor, if the mentor has made a withdrawal, the system displays a notification that there is a mentor requesting a withdrawal request. The system displays class price information and what price must be transferred to the mentor as well as the mentor's account number. If it has been transferred, the system displays information that the withdrawal request has been transferred on the Withdrawal Request page. Otherwise, the system displays information that it is waiting for confirmation.

Based on the results of testing and real implementation of the system to users namely Admin, Member, and Mentor, the overall functionality is running properly. User acceptance of the platform as a whole has a positive trend. Based on the use of the platform, members can easily access paid and free UI / UX learning content in the form of interactive videos and discussion forums. For mentors, this platform becomes a medium that can disseminate the UI / UX modules they have built with an income that can support their activities. As for the admin, data management and various activities on the platform are faster and more precise.

4. Conclusion

The development of the proposed system as an online course platform in the fields of User Interface (UI) and User Experience (UX) can support people who are looking for good quality UI / UX learning content. With the construction of this online course platform, the distribution of learning content regarding the UI/UX field can be conveyed easily to the public. The community can develop their knowledge and abilities by accessing interactive and interesting video-based learning on this platform. People can easily find mentors and discuss with them in their field. This platform is useful as a place that provides facilities to easily upload course learning modules that can be used by mentors.

Acknowledgment

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