UX ANALYSIS ON DEVELOPMENT OF DIGICOUSE.WEB.ID COURSE ONLINE APPLICATIONS (CASE STUDY IN FILOMENA CV IT MEDIA)

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ABSTRACT

In the interview results, some features that make it difficult for users to register and attend classes, in terms of the appearance of the website are less or less aware of the features on the very essence of the page as the main information, content is not fixed when first opening the website, navigation menu that is difficult, design and color lack of attractiveness to users. The researcher made a questionnaire. The data was strengthened after conducting a questionnaire to the user which resulted in an evaluation percentage of 40.15% which showed the level of user dissatisfaction with the application in the original questionnaire attached to the research attachment [3]. In terms of website appearance, visitors do not know the class features that are very biased to provide understanding and ease of use and as the main features of the application. This information is intended for the general public users who have never taken an online course.

Then from the results of the conclusions of the research conducted by the user on the website digicourse.web.id can be well received in determining the desired course. And suc website digicourse.web.id is in accordance with a centralized task design.

Keywords: HCD, Human Centered Design, UX.

1. INTRODUCTION

CV Filomena IT Media is a website development company, software and mobile applications. And within its scope of work, CV Filomena IT Media is controlling several projects and selling IT products [1]. One application that is being developed is Digicourse. a platform that brings students together with material providers with material that can be understood through interactive video tutorials, where on the web it provides features - online courses that provide materials about learning about the world of technology. Interviews have been conducted to the use of the Digicourse.id web, there are several problems in the use of the UX.

An interview with Mr. Muhamad Riyan as an IT staff stated the constraints on features that were not in accordance with the user experience, namely the Digicourse.id website was not good in terms of design, page layout, navigation, and website content. Functional problems on the website are still experiencing errors, access time for website content is still very long. The data obtained is 10 minutes, content that is still not well known by the user, Menu registration for new users is still difficult to understand, retrieval of course material is still poorly understood by the user its use and main page when the website is still lacking in information that presents about courses on the digicouerse web.

The quality of the website depends on the quality of the software. If the quality of the website is normal, then the user will easily leave the website. The above problems affect interactive software with the application of a significant interface, according to Palmer there are six points that reduce usability value, the time interval for data reception, management of page navigation, interactivity, responsiveness, information on website and user satisfaction material [2].

In the interview results obtained some features that make it difficult for users to register and attend classes, in terms of the appearance of the website visitors do not know the features on the course pages are very essential as the main information, content is not obtained when you first open the website, menu navigation is difficult, design and color gives less appeal to users. Researchers made a questionnaire reinforced data after conducting a questionnaire to users which resulted in an evaluation percentage of 40.15% which showed the level of user dissatisfaction with the application in the original questionnaire

attached to the research attachment [3]. In terms of website appearance, visitors do not know the class features that are very influential to provide understanding and ease of use and as the main features of the application. This information is intended for the general public, especially users who have attended online courses.

From the problems described, it is necessary to do an analysis that is used to assess the importance of the Digicourse.id User Experience application. So this research was conducted to find out the percentage of User experience by conducting an assessment using tests performed after the user completed all the given tasks. For this reason, this study uses a usability approach that aims to produce designs, page layout, navigation and content content that suits the needs of users. The usability value generated from the use of this Human-Centered Design method will improve on three things, namely effectiveness, efficiency and user satisfaction [4].

Based on the background of the problem raised, the problems that occur at digicourse.web.id are the importance of making a good user experience with the Usability approach.

2. CONTENTS OF RESEARCH

2.1 Theoretical Basic

The theoretical basis is the sources and theories that form the basis for the development of Information Systems.

2.1.1 *UX (User Experience)*

User experience is the concept and response from the application of a system. User Experiece (UX) assesses a person's satisfaction and comfort with a system. An attitude in compiling UX is that the public has the power to determine the level of satisfaction. No matter how good the features of a system without the intended audience can feel satisfaction and comfort in interacting then the UX level becomes low.

UX design also experienced expansion, because it is comfortable in a device will be different from other devices. Accessing the web from a desktop computer will be different from accessing the same web via a smart phone. Likewise digital media on display is increasingly varied with the presence of social media. But when it comes to content delivery, a brand must display the same language in various channels and media. Therefore the UX design needs to be studied further so that the brand connection remains solid and focused [6].

2.1.2 *Usability*

Usability is the basic design of the User Experience. The UX design is tested by its users based on this usefulness principle. Often usability designs are accompanied by the word user friendly and other names such as computer-human interaction (CHI), human computer interaction (HCI), user-centered design (UCD), man-machine interface (MMI), human machine interfaces (HMI), machine interface operator (OMI), design (UID), human factors (HF) and ergonomics. Usability and utility create usefulness (Grundin, 1992). Usability applies all systemic perspectives from human relations including installation procedures and maintenance procedures.

2.1.5 *Quality Function Deployment (QFD)*

General Description User Experience is a form of relationship between humans and computers (human-computer interaction (HCI)) which includes websites, smartphone applications and desktop applications. User Experience for this digicourse website is related to what the user feels related to ease, comfort, efficiency, usefulness when opening and browsing content on the website.

The following is a description of the stages of the method analysis used in the analysis as user eperience.

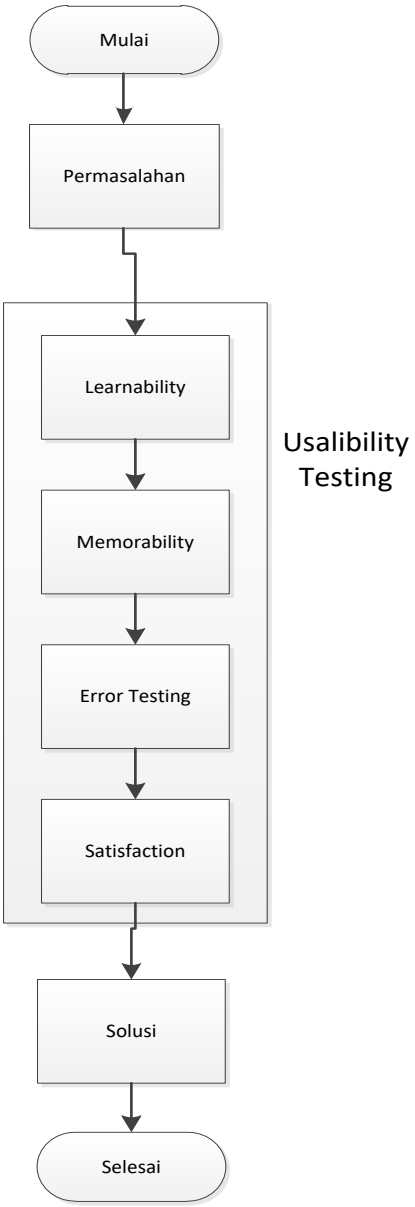


Figure 1. ux stages

The link between UI and UX is the website used for community services, providing information to the community. For that convenience in terms of appearance and use experience makes analysis of both must be synchronous. For that reason, the analysis method used is UAL Analsis using Task Centered System Design method and Human Centertered Design method. arising in developing requirements.

2.2 Problem Analysis

Digicourse is one of the providers of free courses that the majority of languages are English. But most courses are paid, not a little digicourse also provides free courses with good quality and no less good than the paid ones. Digicourse itself has several features for users who will subscribe. Among them is a class feature, here the user can choose the programming class that will be followed, of course, this class menu also lists the price information of each class, then the screencast feature contains videos - tutorial videos for making a simple project using certain programming and the last there is a backlink feature that contains about articles relating to programming in a particular language.

2.3 *UCD Design Analysis*

The concept of UCD (User Centered Design) is the user as the center of the system development process, and the objectives / properties - context and environment of the system are all based on user experience. The principle that must be considered in the USD in this case is as follows:

1. Focus on the user

The design must be a direct interaction with the actual user or prospective user through interviews, surveys and involvement in the workshop on making desires is to respond to cognition and the character and attitudes of users. Its main activities include data collection, analysis and integration into the design information of the user about the characteristics of the task, the technical and organizational environment.

2. Integration Design

The designation must cover the user interface, assistance system, technical support and installation and configuration procedures.

3. Testing the user

a successful approach in designing the core system is that the user is empirically required observations of user behavior, careful assessment of feedback, knowledge of solutions to existing problems, and strong determination to improve design.

4. Interactive design

The system being built must be interpreted, designed, and tested repeatedly. From the results of behavioral tests of functions, interfaces, assistance systems, user documentation, and training approaches.

The purpose of this study is to issue an information system design on the web digicourse with UCD to capture user needs.

2.3.1 *Method of Collecting Data*

Regarding data collection and information system design methods are as follows:

1. Literature Study

This method is made by reading and understanding reference books, journals, and other media related to general data processing that gives and reinforces existing theories and to provide adequate information in completing this research.

2. Interview

Interviews are made to relate to the owner of the Digicourse to reach the idea of the system to be designed, and evaluate the system.

3. Questionnaire

The questionnaire was used to explore the needs in determining system functionality and was also used for system consideration, by asking questions to several respondents, where the answers were categorized and grouped, where respondents were registered users of the Digicourse. And for the technique of determining the number of samples, according to Central Limit Theorem, in determining the number of samples even though the distribution of the population is unknown, the sampling distribution will be normal if the number of samples meets. The number of samples in question is a minimum of 30 (n = 30), where the greater the number of samples, the sampling distribution will reach normal distribution, in other words if the population is not normally distributed, the average sample will be normal if the sample size is greater or equal 30. So the author makes 30 as the number of samples. And for sampling techniques using non-probality sampling, that each member of the population has a zero chance. That is, the collection of samples is based on certain criteria, with purposive sampling technique, collecting samples based on specific characteristics, the characteristics of the sample taken are those who are adults or 12 years and over and understand the technology.

1. *Plant the human centered proses*

At this stage researchers make literature studies of this method is done by reading and understanding reference books, journals, and other media related to general data processing that helps and reinforces existing theories, so as to instill a commitment that the formulation of User Centered Design (UCD) can satisfy the user's wishes. with company information and product information, product type information, and product prices.

1. Specify the context of use

This stage researchers will know people who will use the system and describe for what and in what conditions they will use this product through identifying stakeholder techniques. This information system is made to provide information on the use of the dgicourse website. The information provided is in the form of a web containing class data that can be followed, a form of video in the form of a language consisting of language - programming language that can be learned through the class. The target user of the information system consists of 2 users:

1. Students, who can access any class information that can be followed via the Digicourse web
2. Digicourse employees, as administrators who play a role in managing and maintaining data on the system.

2. Specify user and organitional requirment

This stage researchers will identify the detailed list of user needs through questionnaire techniques. Based on the results of the questionnaire to the user there is some information needed related to system design.

a. Information needs:

1. Data about programming languages that can be followed by the class
2. User data that has been registered
3. Class tutorial data that can be followed for free
4. What material data is provided in each programming language

b. Functional requirements:

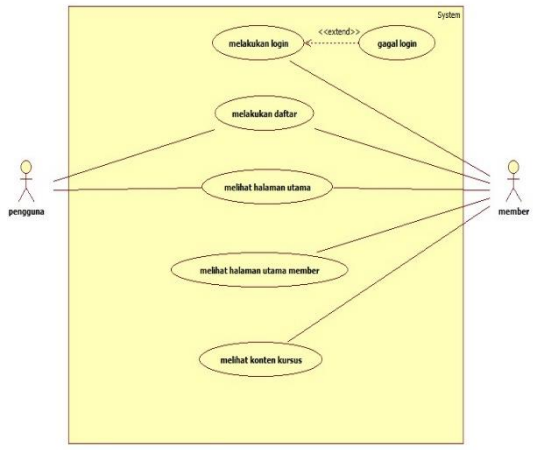
1. Has administrator facilities for data management.
2. Able to display the main page containing all information needed by the user.
3. Able to search class programming languages desired by the user.
4. Able to display class videos that will be followed

c. Non functional needs:

1. The system has an authentication facility to log in to the administrator page.
2. The system can be entered from anywhere as long as it is connected to the internet.
3. The system can be accessed through a browser on various devices.

3. Usecase

The use case on the Digicourse website is a construction to describe how the system is seen in the user's eyes. Use cases include defining the functional and operational needs of the system by defining usage scenarios. This analysis is intended so that the flow in the application usecase can be understood not as an application design, but rather emphasized on the analysis, can be seen in the following figure



4. Definition Of Actor

This is filled with the list of actors and role descriptions for the actor. The description must explain the authority of the actor in the software. Can be seen in the following table:

No	Actor	Description
1	The User	Users can visit the home page of the website and can register as a member
2	Member	Members can access the course content that has been owned and make payment transactions for course content

5. Definition Of Usecase

Contains the use case list and a brief description of the use case. Can be seen in the following table the definition of each usecase

No	Usecase	Definisi
1	Melakukan login	Pengguna dan member dapat melakukan login
2	Gagal login	System memvalidasi data login pengguna jika terdapat kesalahan pengisian data login
3	Melakukan pendaftaran	Pengguna dapat melakukan pendaftaran sebagai member dan selanjutnya melakukan login untuk akses konten kursus yang tersedia
4	Melihat halaman utama	Pengguna dan member dapat melihat halaman utama dan konten website digicourse
5	Melihat halaman utama member	Member dapat melihat halaman utama yang menyediakan konten kursus dengan harga dan materi sesuai dengan konten kursus
6	Melihat konten kursus	Member yang telah melakukan pembayaran konten selanjutnya dapat mengakses konten kursus berupa video

3.6.2 Analysis Conclusion

Arriving at the conclusion of the analysis with the application of several methods used in the analysis, UX analysis was obtained with accuracy in accordance with the sample data used as analytical material as follows:

1. Learnability, after being analyzed and proven that the level of learning about the ease of using a website results in using SEQ (Single Ease Question) resulting in 70.74% and Using SUS (System Usability Questions) yielding 61.6%,
2. Memorability with human centered design methods for user experience in visiting other websites, and taken sample images chosen by the user, this selection is obtained from the user's user experience of the website that was visited.
3. Error Testing, in calculating the level of error coding display by using a generator in the analysis, has the conclusion that the website requires deeper analysis.
4. Satisfaction, UX uses the Task Centered System Design method to provide analysis results in the form of steps in the system website and used as recommendations in improving the appearance.

1. Closing

This chapter discusses how the conclusions of this thesis research are the results obtained from the analysis, design and implementation, and testing of UX Analysis on the Digicourse web. This chapter also includes suggestions for providing important notes in the development and improvement that can be done in the development of the next information system.

1.1 Conclusion

The conclusion of this study is the user needs on the website digicourse.web.id can be well received in determining the desired course and the design of the website digicourse.web.id is in accordance with the analysis of human centered design.

1.1 Suggestion

The author's suggestions for application development are:

1. Testing can use other methods in implementing the calculation of the level of satisfaction with UX.
2. Development can be done by adding an Android platform.

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