



Increasing Website Browsing Efficiency Using The User Centered Design Approach At The STMIK Syaikh Zainuddin NW

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Abstrak—Website institusi pendidikan dituntut untuk terus melakukan perbaikan dan penyesuaian baik dalam isi konten yang dimuat pada website maupun hal-hal baru yang dibutuhkan oleh para penggunanya. Minimnya pengunjung yang berkunjung ke website kampus STMIK Syaikh Zainuddin NW Anjani menjadi suatu permasalahan bagi lembaga tersebut. Oleh karena itu, penelitian ini berfokus pada bagaimana mengembangkan website SMTIK NW Anjani agar jumlah pengunjungnya meningkat. Sebagai salah satu media yang digunakan untuk mempromosikan kampus, tentunya website harus dibuat lebih baik dari segi desain antarmuka maupun dari segi penyajian konten yang sesuai dengan keterlibatan pengguna. Analisis dan evaluasi website dilakukan untuk mengembangkan suatu sistem. Perbaikan yang dilakukan berdasarkan hasil analisis data dengan menggunakan metode User Centred Design. Penelitian ini menggunakan metode User-centred Design yang dalam pengembangannya menggunakan sudut pandang pengguna terhadap sistem. Pembahasan penelitian ini dimulai dari mengidentifikasi kebutuhan pengguna, menganalisis kebutuhan pengguna, mengevaluasi desain awal, membuat desain solusi, dan mengevaluasi desain solusi. sehingga tampilan atau informasi yang diberikan sesuai dengan kebutuhan pengguna dan memberikan informasi yang selalu update serta dapat membantu dalam proses belajar mengajar. Hasil analisis evaluasi dapat digunakan untuk mendesain ulang tampilan situs <https://stmikswn.ac.id/>. Pembahasan penelitian ini dimulai dari mengidentifikasi kebutuhan pengguna, menganalisis kebutuhan pengguna, mengevaluasi desain awal, membuat desain solusi. Setelah itu dilakukan analisis data untuk melihat tingkat presentase efektivitas, efisiensi dan tingkat kepuasan yang dirasakan pengguna saat menggunakan situs awal dan situs usulan. Data ini kemudian digunakan sebagai dasar untuk melakukan perbaikan yang dilakukan pada paper prototyping sebagai situs usulan.

Kata Kunci: Website, Browsing, User Centred Design, STMIK

Abstract—Educational institution websites are required to continue to make improvements and adjustments both in the content of the content that is loaded on the website as well as new things needed by its users. The lack of visitors visiting the STMIK campus website Syaikh Zainuddin NW Anjani is a problem for the Institute. Therefore this research focuses on how to develop the SMTIK NW Anjani website to increase the number of visitors. As a medium that is used to promote the campus, of course the website must be made better both in terms of interface design and in terms of content presentation in accordance with user involvement. Website analysis and evaluation is carried out to develop a system. Improvements made based on the results of data analysis using the User Centred Design method. This study uses the User-centred Design method which in its development uses the user's perspective of the system. The discussion of this research starts from identifying user needs, analysing user needs, evaluating initial designs, creating solution designs, and evaluating solution designs. so that the display or information provided is in accordance with user needs and provides information that is always updated and can help in the teaching and learning process. The results of the evaluation analysis can be used to redesign the interface of the site <https://stmikswn.ac.id/>. The discussion of this research starts from identifying user needs, analysing user needs, evaluating initial designs, creating solution designs. After analysing data to see the percentage level effectiveness, efficiency and level of satisfaction felt by users when using the initial website and the proposed website. Data is then used as a basis for making improvements made in the prototyping paper as a proposed website.

Keywords: Website, Browsing, User Centred Design, STMIK

1. Introduction

STMIK Syaikh Zainuddin NW Anjani is a private university in East Lombok, West Nusa Tenggara. STMIK Syaikh Zainuddin NW Anjani was founded on June 17, 2006. One of the information technology services used to provide information to public is a website (Ela Nurlailah, 2023). Website is an information system used to provide web-based academic information and services with the aim of providing academic information to students. Through this website students can find information related to campus academics such as campus biodata, academic activity publications, study programs, lecture schedules, calendars, graduation forms, value information (Yusliani & Mustafidah, 2020).

According to (Utomo & Supriyanto, 2020) information system which is located at <http://stmikswn.ac.id> on this website there is a menu that provides various kinds of information, including: a homepage that provides the latest news headlines and info, a campus profile that presents an agenda profile that contains information about a list of activities will take place at STMIK NW Anjani, news that contains the latest news on STMIK, because currently many colleges and universities contain strong content combined with information about schools and educational resources according to the design website (Elakiya. K, 2023), there are two parts in website planning: 1) define the goals and resources needed to achieve them, and 2) define the target audience, site details, required technologies, and the outcome of the results. One of the things that can be done to develop the campus is through a website where a campus that already has a website will continue to exist in the eyes of the community every year and there will be no shortage of students, but the number of students will continue to increase because of the excellence of the campus. If the campus does not promote optimally, it will certainly cause the number of students enrolling to decrease to register.



There are various ways that are done by campuses and usually study the brochures by visiting the nearest school and placing banners on the street. However, this method is not very effective because it requires a lot of money and time. For example, we conduct socialization to schools to promote the campus and each school needs 1 hour, of course this will take a lot of time and require many teams to do presentations at each school. In addition, this activity certainly requires a large budget and time (Eni Dwifitri Astutiningtias, 2018).

The design of a bad website display will cause visitors to be less interested in visiting a website starting from a bad appearance such as choosing the color, layout of the color buttons and the presentation of inappropriate information content such as lack of information on student activity schedules that are not included in program activities and information about lectures This causes visitors not interested in browsing websites and has a negative impact on an educational institution such as a university because the function of the website is as a medium for disseminating information to be disseminated to many people. As a media to disseminate information that is easily accessible to anyone, of course this really encourages each campus to provide their own campus website as was done by STMIK Syaikh Zainuddin NW Anjani.



Figure 1. A Screen Grab from current STMIK Website

In designing a website to attract student interest, of course you have to pay attention to several aspects such as display design according to student interests Students and prospective students can access information through the website This research is focused on the quality of the website as an information medium using the user centred method. the title "Increasing Website Browsing Efficiency through User Experience using the User centred Design Method at the Sekolah Tinggi Manajemen Informatika dan Komputer (STMIK) Syaikh Zainuddin NW Anjani East Lombok - NTB." With this research, it can provide a solution for the campus to increase student interest in visiting the campus website

2. RESEARCH METHODOLOGY

2.1 Research Design

This study will analyze and provide solutions on how to improve campus website explorers to achieve the desired goals, such as helping prospective students get information about campus profiles and learn more about how to get to know the campus in general through the website and provide the latest information to STMIK Syaikh Zainuddin students.

2.2 Proposed Methodology

This research is a qualitative and quantitative descriptive research. Quantitative descriptive method is a method that only provides an overview or description of the variables of a phenomenon under study. The variables studied can be one, two, three, or more (Sanjaya, 2011). In this study, researchers will use the user centered design method as described by ((Rizka Dwi Cahyani, 2022) that making designs using the user centered design (UCD) method has a process or stages according to ISO 9241-210, 2010.

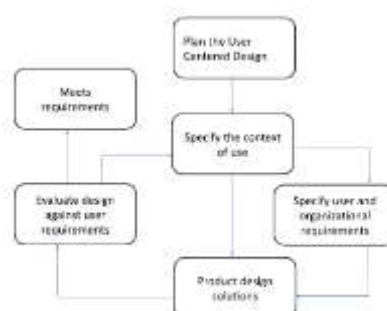


Figure 2: Represents the stages of the User Centered Design



3.1.2 Validity and Reliability Test

The next stage is to conduct a validity test. The validity test is used to measure whether the question is valid or not, by looking at the correlation value of each question item that has been determined. The purpose of the validity test is carried out so that the data obtained can be relevant or in accordance with the measurement objectives. To be able to find out valid statements-questions can be seen from the Corrected Item-Total Correlation value. The statement of the items is declared valid if it has a correlation coefficient value greater than or equal to 0.30. The variables in the Corrected Item-Total Correlation column have a value greater than 0.30. So that as many as 24 statements or questions are declared valid.

Table 1: Reliability Cronbach's Alpha

Table with 2 columns: Cronbach's Alpha (979) and Number of item (24)

The results of the calculation of the reliability test can be seen from table 1. It is known that the Cronbach's Alpha number is 0.979. So this figure is greater than the minimum value of Cronbach's Alpha (α), namely 0.60, therefore it can be concluded that the research instrument to be used is truly.

Table 2: Descriptive Statistics

Table with 5 columns: Variable, N, Minimum, Maximum, Mean. Lists variables Q1-Q24 with their respective statistics.

Table 2 shows the grouping of design evaluation results into four categories, namely Content, Organization and Readability, Navigation and Links, User Interface Design, and Performance and Effectiveness. Based on Table 3, it is known that there are three attributes included in the bad category that will be a problem from the results of the current version of the design evaluation, as shown in table 3.

Table 3: Evaluation Website Currently

Table with 2 columns: Problem, Description. Row 1: Problem 1, This website is not up to date in providing the information I need





Problem 2	Less respondents can easily find the information I want on the website
Problem 3	Lack of attractive website user interface design

The appearance of the website is not updated and maintained, this attribute has a value of 0.297, the second problem is that the information needed by respondents on the website is incomplete. So that visitors are not interested in visiting the website, this attribute has a value of 0.297 which is in the range of 0.2 - 0.3. The third problem regarding the design of the website user interface is less attractive, this attribute has a value of 0.297.

Table 4: Participant

No	Participant	Total
1	Student	38,9
2	alumni	22,2
3	Prospective students	38,8
4	Not a student	-
Sum		45

3.1.3 Interview

Researchers not only use questionnaires but also conduct interviews with website users, based on the results of interviews conducted by researchers with several users of the STMIK Syaikh Zainuddin NW Anjani website including investors, students, alumni and other visitors by asking directly about the use of the website. At this stage, user needs will be determined by means of interviews. Based on the results of interviews with the academic section of the Head of the Informatics Engineering Study Program, namely:

- a) Information needs
 - 1. Lecture schedule change data
 - 2. Financial information data
 - 3. Data on UTS, UAS, Assignments and Final Grades
 - 4. Subject data that have not been taken each semester
- b) Functional requirements
 - 1. Displays the schedule of changes to lectures
 - 2. Displays information about finances
 - 3. Displays the UTS, UAS, Assignment, Final Grade scores
 - 4. Displays a list of remaining courses

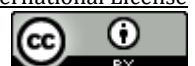
3.2 Proposed Development Currently Website

3.2.1 Home Page

The appearance of the development of the homepage design can be seen in Figure 5.3, in this figure the researcher has developed it by changing the homepage of the main website of STMIK Syaikh Zainuddin NW Anjani, namely making changes to the top features to be able to access campus facilities such as SIAKAD to make it easier for students to fill out the KRS, academic needs and others. In addition, there is also an eLearning feature on the dashboard page because previously this feature was located in the academic feature while on the latest website it is placed at the top of the main section to facilitate the learning process.



Figure 5: Evaluation Results of Main Display of the STMIK Anjani Website





There is News, Announcement and Activity content displayed on the main page content of the old version design, while the solution design contains News, Information, Announcement, Research, Scholarship, Agenda, Registration content, and displays several choices of student areas of expertise in the middle of the website.

3.2.2 Development Features

Figure 6 shows the appearance of the old version of the website which is not yet optimal in terms of the features provided.



Figure 6: Old Website Features

The latest website display has added features such as library, research, fees, and calendar as seen in figure 7.



Figure 7: New Website Development Features

3.2.3 Error Page Development

In the old version of the design, the error page was blank, there was no notification that the website was under repair or development, which confused website visitors as seen in the image 8.



Figure 8: Current Website Profile Page

Then, in developing a new website design, it will provide information if the website page is in the development process, as in figure 9.



Figure 9: Improvements to the Current Website Profile Page



3.2.4 Academic Page Development

The appearance of the old website's academic page does not contain content on study programs, while in the development design, the academic page is increasingly improved and the content layout provides clear information when visitors search for the desired information. Figure 10 shows the academic page.



Figure 10: New Appearance of the Academic Website Page

3.2.5 Design Content

The appearance of the new content design development by providing several interesting features and is very user friendly to website visitors compared to the previous website appearance. Figure 11 shows the new website content design.



Figure 11: New Design Website for Content Information

3.2.6 Scholarship Features

In the old website design, there was no scholarship feature based on previous website reviews. The scholarship feature is most sought after by prospective new students to attract students to join the university. In the development, the scholarship feature was added and displays several scholarship options provided by the university. It can be seen in figure 12.



Figure 12: Design of Scholarship Feature Development



3.2.7 Facility Features

In the new development design, the researcher adds facility features to support the information that website visitors want to visit because with this facility feature visitors will find it easier when they want to know the facilities provided by the university itself without having to go and check the facilities one by one directly, of course, it as seen in Figure 13.



Figure 13: Facility Features Development Design

5. CONCLUSION

This study produces a website design prototype of Syaikh Zainuddin NW Anjani as a reference to see the extent to which the results of the evaluation of the old website have increased to increase the number of visitors to the website. increasing the number of website visitors based on the results of research carried out with due regard to user needs based on the results of questionnaires that have been distributed to respondents and we hope that future research will not only be limited to prototypes but directly to the website creation stage.

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