ENRICHING THE USER EXPERIENCE IN WEB-DEVELOPMENT USING UI/UX

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ABSTRACT:

In this study, we demonstrated our comprehension and proficiency with the internet, operating system, material, and device interfaces. In order to assess 22 sophomore, junior, and senior IT department students' basic knowledge of UI/UX, design research, design notion, and design production, this study created a list of 18 items in four categories. The understanding results were then categorized into three categories—excellent, normal, and insufficient—and assessed. Excellent was determined to be 18.39%, average to be 38.52%, and insufficient to be 43.07%. As a result, 81.61% of students did not comprehend UI/UX well, whereas 18.39% of students understood it. In particular, the design research area received 44 points and the design topic received 29 in the comparative study of the four categories. The lowest score was recorded in the design production section, which was 11 points. Subsequently, the ten assessment questions in the smartphone UI/UX build guide assessment were assessed using the same methodology as the UI/UX comprehension assessment. The good score was assigned a value of 3, the mean score was 73.3, and the bad score was 155. The assessment of the UI/UX construction guidance was lower than the UI/UX comprehension. Therefore, UI/UX professionals should be nurtured with professional course structure and a systematic curriculum in order to promote UI/UX comprehension and content creation capacity.

Introduction:

 In the Web 3.0 era, web pages are inferred from the a person's center to clever Web intelligence through a customized and intelligent web [1]. The World Wild Web, which existed during the Web 1.0 period, is a prime example of unilateral information provision. In the Web 2.0 age, material may be developed by individuals and disseminated on an opportunity basis through sharing, openness, and involvement. The web processes and uses information by interacting with different devices and comprises of different items on a web page. Interacting interfaces play a crucial role at this time. However, it is frequently ignored. Investigating UI/UX-related technologies, such as HCI (human-computer interface) and associated materials, gadgets, and applications, is the aim of this study.

In terms of both the generation of content and the design element, content design (Design) [2, 3]. Therefore, this study assesses students' comprehension level about the computer-related sector and analyzes the results in order to develop UI/UX and content development skills.

Thanks to developments in information technology, location, place and time are no longer obstacles to the transmission of information. Global pressures force the education industry to consistently adapt technological advancements in an effort to raise educational standards and change how modern society adopts communication and information technology. The development of computer technology is intrinsically related to the fast rise of information technology. Universities will find it much simpler to produce information and to handle all aspects of processing of data and report generation thanks to information technology.

Information gathered from the database (information system) is an internal system of the company that combines daily transaction processing requirements to support managerial and strategic initiatives as well as operational activities that can report activity information to those who are interested. Information systems are used at Rosma College of Technology and IT Management (STMIK), a university.

Literature Analysis:

 This study develops a model UI/UX on a smartphone app to investigate instances involving failed objects and locating scattered items throughout common areas at an application that indicate "return" in addition to using several pieces related to the object of testing in the method of Create Understanding, based instruction, as well as creating web-based learning utilization designs in addition to additional QR Code investigation.

This the use model is designed using the Designing Thinking method founded on the concentrate on user in order to facilitate the desire for information exchange to feed the case. This application creation model can act as a martyr intermediary in facilitating the need to information exchange between the power source victim and the rescuer.

Raharja College was designed to promptly provide students with information on learning results. The Autonomous Email System (AEMS) serves as a lecturer's remit for input values and is observed by the department head and the RPU.

The study's findings include the Automatic Emailing A system on Inspection Plus (PEN+), which reduces the amount of paper used in the process of sharing student grades and facilitates the effective, efficient, and real-time publication of learning values. It also makes the RPU portion of sharing student grade information easier.

UI/UX Understanding Design Feature:

Needs, Demands, Attributes, and Capabilities are the four main axes of UX. As a result, it identifies issues with user demands, applies user expectations and motivation, and integrates information about user traits with aspects of society, culture, environment, and faith. Aspects of capacity include limited service, soaking, and the geographical and temporal margin of a particular user in a particular setting. This chapter develops a set of questions for the UI/UX interface of the IT department, and it provides the self-diagnosis checklist as a response to the questions. The purpose of this study is to understand UI/UX and manufacturing capacities by looking at the evaluation results in several areas. The self-diagnosis of the UI/UX assessment elements is listed in Table 1 below.

METHODS:

The design science paradigm behind this study is based on artificial science and technology. This model is a problem-solving paradigm. Through a series of stages of analysis, development, execution, administration, and usage of information systems that may prove used effectively and efficiently, this paradigm focuses on identifying innovations that define concepts, practices, technical competences, and products. The goal of the design research paradigm is to improve the processes and procedures used in the development of IT artifacts[20]. Researchers will gather data for this study on how STMIK Rosma Karawang handles complaints from students. The methodology of this study is design thinking. This method consists of the following five steps: definition, empathy, concept, prototype, and test.

The design thinking technique is a multi-stage, iterative process to identify and comprehend users, user problems, and solutions that enable the author to characterize the problem from a particular perspective. Because of this, the design thinking approach subsequently enables authors to produce a large number of ideas and creative solutions by expanding the design through prototypes and hypothetical testing.

RESULT AND DISCUSSION:

1. **Empathy In Action We** performed interviews and observations as part of this empathy process. Through complaints and user behavior when utilizing AIS, observations are made. In order to get reliable data, the interview was then done by asking the participants direct questions[21]. This empathy level involves gathering facts in many ways. In order to gather information regarding the procedure for managing student grievances at STMIK Rosma, research conducted questions with students and associated staff during the empathy stage. These interviews were based on the criteria for resources individuals who submitted grievances and the associated staff who dealt with student complaints. The interview's findings support the conclusion that there is presently no recorded complaint data given by students since the complaint management process for students is handled manually.

2. **Specify Outcomes:** The define stage comes next in the data collecting process after the empathy stage. In this define stage, the present business processes will be analyzed, and problems will be identified based on the procedures that are currently in place and the outcomes of earlier data collecting.

3. **Proper Outcomes :** The explanation of solutions derived from the several concepts that have been explored up to this point[22]. Following the define step comes the idea stage. During the define stage, business process analysts' findings from managing student complaints and issues in the process were gathered. These findings were then included in an ideate stage, where researchers developed solutions for identified issues and suggested future business processes related to the the pupil complaint handling process.

4. **Prototype Outcomes :** The prototype is the last phase of this study. The process of turning the concepts into a working prototype or testable product is known as the prototype process [23]. The ideate stage, which is explained by the application design, is solved at the prototype stage. Using Mockuplus Classic, researchers created a UI/UX tool for managing student complaints.

   It may be inferred from the empathize stage that there isn't a platform in Indonesia that offers free education with qualified professors.

   Moreover, it may be inferred from these issues that kids enrolled in middle school, high school, and elementary school are the intended users. As support for the intended audience's hypothesis, the authors interviewed further research participants. Based on the research findings, the authors concluded that the participants still struggled with the school learning process and that they either needed to take lessons outside of school or fully understand the material.

However, financial limitations prevent some students from enrolling in the course.

CONCLUSION:

Based on the findings of the examination carried out by scholars about the steps involved in resolving student grievances further deductions may be made.

1. The manual technique is still being used in the business process for processing student complaints. Pupils voice their grievances orally by visiting the campus or by messaging on social media platforms like WhatsApp.

2. Based on continuing business processes, a problem analysis was conducted. The findings showed that the student handling of complaints process is laborious, that information cannot be submitted quickly, that there is no status update on the complaint dealing with process, that the grievance data is poorly documented, and that there are no explicit procedures in place for performing student complaints.

3. The UI/UX application designed to manage student complaints is the outcome of this research project. The complaint form feature, complaint status check feature, complaint history feature, submitted complaint information report feature, live chat function within the application, and user profile feature are the six features included in the application design. It is envisaged that the pupils complaint handling application's UI/UX architecture would help institutions enhance their current business procedures to make them more efficient.

Based on the findings of the study, the study focusing on the design of the "IdeIn" online application employing the design thinking methodology seeks to realize the fourth aim and the Sustainable Development Goals, also called the SDGs, by creating a design that is tailored to the needs of each individual user. The "IdeIn" online application's UI/UX design prototype received a SUS score of 90 through usability testing with the SUS technique, indicating excellent levels of efficacy, effectiveness, and user happiness.