Line Learning Software to Improve Learning Interest

Juanda1, I E Wessels2, L Amelia3, Irmayanti4
1Departemen Sastra Inggris, Universitas Komputer Indonesia, Indonesia
2Departemen Ilmu Komunikasi, Universitas Komputer Indonesia, Indonesia
3,4Departemen Manajemen Informatika, Universitas Komputer Indonesia, Indonesia

Email: *juanda@email.unikom.ac.id

Abstract. The internet's role has become crucial. Even when the current Covid-19 is occurring, internet use cannot be avoided. One of the most effective internet services during this pandemic is in education, wherewith the internet can make interactions between teachers and students remotely. Therefore, the purpose of this research is to design online learning applications in Indonesia. This research used the Waterfall method. This method explains the needs of application software in the process of maintaining this application. This application acts as a platform that can help teachers and students. This application provides the teaching staff the freedom to give the material that all students can access freely. This study's result is an online learning application created as efficiently and effectively as possible for use by teaching staff and their students.

1. Introduction

Education is essential for everyone. Education is learning that is usually done directly. During the Covid-19 period, learning experienced several obstacles; students could not understand or interact directly with a school as usual. Therefore, this is where the internet's role becomes essential because it can make interactions between teachers and students remotely. This study aims to design or create online learning applications in Indonesia to increase interest in learning further and facilitate learning. The method for making this application will use the Waterfall Method.

In general, an application is a software or program created and developed to perform specific tasks on a computer, laptop, or smartphone already available for use by users. According to the expert, that application uses a computer, instructions or statements arranged so that the computer can process input into output [1]. Learning comes from the word "learning", which means an activity of self-development through practice, based on one's ability under the teacher's guidance. While the name "learning" implies an effort to teach a person or group of people through various efforts and various strategies, methods approach against achieving the goals that have been planned [2]. Online Learning uses an interactive Internet-based model, such as Zoom, Google Meet, Google Drive, and others [3]. Learning interest is the person's driving force to carry without learning activities to upgrade skills, experience, and knowledge. The interest grows because the desire to understand and know something directs and encourages students' interest in learning to be more serious in learning [4].

The development of information and communication technology has significantly influenced the teaching and learning process in the present Industrial era. Then teachers to facilitate the learning process have used access to technology. Access to technology can also improve the quality of education [5]. It encourages researchers to conduct a study on the use of technology in education, one of which is the...
title of research that applies access to technology in the field of education, which is mobile-based learning applications for literacy disabilities [6]. This study aims to make it easier for the Deaf to carry out Learning by using the researcher's application [7]. This research explains that there are some basic rules to create a good interface for users. These basic rules are categorized into eight “golden” rules, namely: 1) Enable frequent users to use shortcuts; 2) Fight for consistency; 3) Design dialogue to yield closure; 4) Prevent errors; 5) Offer informative feedback; 6) Permit easy reversal of action; 7) Reduce short-term memory burden; and 8) Support internal locus of control [8]. The researcher uses two design stages to design the application, namely the Splash Screen Interface Design and the Main Menu Interface Design [9]. The research concluded that this application was the eight golden rules of Shneiderman and Plaisant, standard guidelines that can be used to design or build application interfaces for novice-level users or novices (in this case, illiterate users). This learning application is easy enough to be used by illiterates [10].

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2. Method
The research used the Waterfall method. It is composed of several phases where each of the steps is defined by different goals and tasks. If stage 1 has not been completed in the Waterfall Method, then stage 2 cannot be initiated, and so on. All phases are interrelated, and each process should be documented and detail.

The Waterfall method requires that every requirement, system objectives, and specification defined in detail. In addition, the waterfall method does not accommodate changes in the middle of the development process. Therefore, the client and analyst team's acquisition in the early stages is the target and the result. Everything should consistent and conform with the acquisition until the application is completed and surrender to the client.

The following are the stages in the Waterfall Model (see Figure 1), namely:

1. This stage gathers the whole needs then analyzed them to define the conditions that the program must fulfill.
2. Design, the result of this stage, produces an overall system design and specifies the software's flow to a detailed algorithm.
3. Implementation, this stage converts the design into program code. The resulting code is in the form of modules that will be implemented into a complete system.
4. Testing, this stage merges the modules that have been made, and tests are carried out to determine whether the software is in accord with the design and whether the software has any errors.
5. Maintenance, this stage is the installation and repair process of the system as approved.
3. Results and Discussion
This section will discuss the analysis of the needs of the pupil's eye. This system will be explained according to the requests requested by teachers and students.

3.1 Analysis
Based on the implementation of the theory put forward by Jirasak that the results of interviews and observations, there are 2 actors in the application of this application, namely teachers and students. It is in Table 1 Actor Identification.

Table 1. Actor Identification

| Not | Actor     | Description                                      |
|-----|-----------|--------------------------------------------------|
| 1   | Teacher   | People who explain students' eyes to be shared with students in the application. |
| 2   | Student   | Visitors as students study the subjects in the application. |

3.2 Design
This menu structure design explains the relationship between pages and other pages from one menu to another, displaying the application. The method of the farmer's market application is shown in Figure 2 Marketplace application menu structure.

The home menu is the starting page used to view all the menus contained in an application divided into 3, namely the login menu, subjects, practice questions. A page must be filled in by filling in data in the login menu, starting from entering the name, email, and phone number to log in. In the course menu, students can choose what subjects they want to take from various existing issues. Whereas in the question practice menu, students can do practice questions that have been provided with different topics.

3.2.1 Mockup page
Learning applications play an essential role in online learning today. An essential part of the application before it is made is in terms of design that is then given a visual effect so that the image looks its original form to support what the user wants.
Figure 2, the home design or start page, has three menu options: the login menu, the subject menu, and the question practice menu.

Figure 2. Start Page

Figure 2, Login page interface design for this system is that users must have an account, which at least consists of name, email, password, and number (see Figure 3).

Figure 3. Login Menu

Figure 3, subject page interface design. This page appears after the user logs in, subjects that the user can follow. In addition to the topics that are being followed, a section below displays the user's issues (see Figure 4).
Figure 4, practice questions page. Design practice questions for this package, the list of practice questions can be seen from the banner, start and end dates if it is still opened (see Figure 5).

Figure 4. Subject Menu

Figure 5. Exercise Menu

4. Conclusion
The education sector is currently having difficulties in learning during the Covid-19 pandemic. Almost all levels of education carry out online learning, namely online-based learning. This is done to prevent the spread of Covid-19, which continues to increase. Online learning also needs an incentive to increase interest in learning for students. With the emergence of this application, it is hoped that students will be more active in carrying out Online Learning during the Covid-19 era.

References
[1] Yani F., Irfan, F., & Mia Z. S. 2020. Motivasi Belajar Mahasiswa Pada Pembelajaran Daring Selama Pandemik Covid-19. Journal Education. 6(2) pp. 166-167.
[2] Mather M., & Sarkans A., 2018 Student Perceptions of Online and Face-to-Face Learning. International Journal of Curriculum and Instruction. 10(2), pp. 61–76.
[3] Muhammad I. P. N., Septiana D. A., 2016. Aplikasi Pembelajaran Berbasis Mobile Untuk Tuna Aksara. Journal MATICS. 8(1), pp. 12-16.
[4] Jirasak S., K., 2014. Developing of Indicators of an ELearning Benchmarking Model for Higher Education Institutions. Journal Educational Technology. 13(2), pp. 150-152.
[5] Wicaksono A., 2019. Mencari Karakter Pendidik Yang Ideal Bagi Indonesia (Dalam Cerita dan Realita dari Masa ke Masa). *Journal Ilmiah Kependidikan*. 1, pp. 109-118.

[6] Komalasari, K., Arafat, Y., & Mulyadi, M. 2020. Principal’s Management Competencies in Improving the Quality of Education. *Journal Social Work and Science Education*. 1(2), pp. 181-193.

[7] Wawan, M. Nurul & Waslaluddin, 2014. Analisis Penerapan Sistem E-Learning FMIPA UPI Menggunakan Technology Acceptance Model (TAM). *Jurnal Pengaiaran MIPA*. 19(1), pp. 129.

[8] Dhull, I., & Sakshi, 2017. Online Learning. International Education & Research Journal (IERJ). *Journal Education*. 3(8), pp. 32–34.

[9] Aziz Hussin A., 2018. Education 4.0 Made Simple: Ideas For Teaching. International Journal of Education and Literacy Studies. *Journal Education*. 6(3), pp. 92-98.

[10] Samir Abou El-Seoud, M., Taj-Eddin, I. A. T. F., Seddiek, N., El-Khouly, M. M., & Nosseir, A., 2014. E-learning and Students’ Motivation: A Research Study on the Effect of Elearning on Higher Education. International Journal of Emerging Technologies in Learning. *Journal Education and Technology*. 9(4), pp. 20–26.