1. PRELIMINARY

1.1. Background

The pandemic of COVID-19 forced educational institutions to move from traditional face-to-face to eLearning. eLearning is construed in a variety of contexts, such as distance learning, online learning, and networked learning [14]. For teachers and students, this transition brought with it a new education environment. Teachers faced several challenges, including the new evaluation techniques to be adopted, the development of an interactive eLearning environment, and the design of educational materials that fit into a new environment. For the students, there are many aspects to consider for interactive, collaborative, and efficient learning, from the user interface to the eLearning resources and the learning process.

A typical eLearning definition refers to technological platform that facilitates learning environment for students at their own pace and time through network services like, live chats among groups of students and teachers, online assignments, online answers and questions method, discussion boards, and email support [3]. Ideal eLearning tools must have the capabilities to help the student and the teachers finish their task easily, as they must design the learning experience to help students engage with the knowledge and skills. This means that the teaching tools create for academics must embody the experience of what works for the learner, and must be easy for academics to use [4]. The excellent tool for eLearning should have a function that allows students to learn and remain active and helps them evaluate their performance in the classroom. When an activity is complete, learners reflect on their performance and evaluate the learning process and outcome [5].

After surveying Telkom University students, I discovered that Zoom is the most commonly used tool for virtual class meetings during online learning. Zoom is the most commonly used tool in the learning process, with a percentage of 78.9%, according to the survey's 48 participants, with the remaining 15.8% using Microsoft Teams and 5.3% using Google Meet. Zoom was the choice for many government agencies, universities, non-profit organizations, and individuals. Zoom, was founded by Eric Yuan in 2011 [8]. Zoom offer high-quality audio, video, and screen-sharing capabilities make it ideal for online lectures, virtual conferences, webinars, and other events.

Despite the fact that Zoom covers general classroom activities such as meetings and explanations, students continue to experience less interaction between student and teacher in the functionalities of eLearning tools such as video conferencing and web-based conferencing Zoom due to a number of issues raised by students such as no absent feature, no quiz feature, lack of collaboration between the students in the meeting, internet problems, less engagement in the classroom, etc. Students suggested that the tool include more specific functionalities that represent the traditional classroom, as well as some features that can make the learning process more appealing and engaging. Most students prefer classroom to online learning and according to them, distance learning cannot replace the classroom environment [15].

The study focuses on UX research in interactive online e-learning, where teachers and students are simultaneously interconnected with technology, the Internet, and educational applications using in the learning process and provides recommendations for improvement of eLearning tools currently using for online learning. In addition, this study will also help students to improve their learning skills in computerized learning environments in the future. As a matter of fact, sometimes users judge and create UX about any product before even touching them. Interests in UX has spread out all over domains, including an education field [6]. Indeed, the quality of eLearning tools affects the learning performances of students during their online learning.

The User-Centered Design (UCD) approach was chosen for this study because, in the UCD approach, users are directly involved as an important thing major over the development of the system. ‘User-centered design’ (UCD) is a broad term to describe design processes in which end-users influence how a design takes shape [11]. The best results from this research will then be used as the primary data in the process of creating the best interface design of the learning tool.

The purpose of this study is to investigate user experience (UX) in online interactive e-learning. Explore the User Experience of students towards using Zoom in online learning using Human-Centered Design, design a solution based on the result of the user experience analysis result, and use the System Usability Scale (SUS) method to evaluate the proposed model to meet the user requirement.

1.2. Statement of the problem

Problems can occur in any situation or condition, including online learning using Zoom. These are the number of issues raised by students such as no absent feature, no quiz feature, lack of collaboration between the students in the meeting, internet problems, less engagement in the classroom.

The research questions are:

1. How to analyze user experience in using Model of Zoom in online learning to get information on user needs?
2. What is user analysis experience based solution?
3. Is the proposed model meets the usability of the users?

1.3. Purpose of the study

1. To analyze user experience, use the user centered design method to obtain information on user needs.
2. Design solutions based on user experience analysis results.
3. Evaluate user interfaces that can meet user needs using the System Usability Scale (SUS).

1.4. Activity Plan

To complete this project, there are several steps to be taken, all of which are linked to the research method User-Centered Design (UCD). The final project is planned as follow:

- **Literature review**

This is a process that will be used to support this final project. This phase involves conducting research and making literature reviews of journals, papers, books, and theses related to the final project.

- **Collection Dataset**

In this phase is conducting a survey that consists of student attitude, student perception toward the UX model of Zoom on their learning. The UX research methodology ranges from qualitative to quantitative data from online survey which is a structured questionnaire that the target audience completes over the internet generally through a filling out a form [7]. Quantitative user research methods are designed to quantify and measure user behavior and are used to analyze statistics. Qualitative research tools are extremely useful to explore, seek and gain insight into users' experience.

- **Specify Requirement**

Identify User needs or any business requirements to be met in order for the product to succeed.

- **Construct the design**

The next step is to make this happen by wireframing after specifying the user requirements. Wireframing provides the first framework for the product design to understand it for all participants in a product development project.

- **Design Testing**

In this phase is measuring the task usability by using the System Usability Scale (SUS).

- **Report Elaboration**

In this phase, the Implementation Report is produced and the related research that carried out is documented. This phase is conducted simultaneously.

1.5. Work Schedule

Based on the activity plan established, a time limit for the completion of this final project research in Table 1 is presented within six months and breakdown into 6 weeks in every process that need to be taken and the activity is repeated until final result is obtained.

Table 1 Work Schedule

Activity	Week					
	1	2	3	4	5	6
Literature Review						
Collection Dataset						
Specify requirement						
Construct the design						
Design Testing						
Report Elaboration						