Task Analysis of Facebook users on Frequently used Menus

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Abstract. This paper presents case studies of tasks Facebook users on frequently used menus. 40 respondents involved in testing this analysis task. The respondents use the device they used to use their mobiles to perform some assigned tasks. The completion of this task is timed and then reported. The results of this study are the shortest time to complete the task on the Facebook menu is the task "Like & Comment", where the required time average 10.72 seconds.

1. Introduction
The development of smartphone devices today continue to spoil the eyes and hands to increase the pleasure in interacting. Along with the development of social networking, social media, and the development of mobile device technology, applications are also growing rapidly [1]. Many of the developers of mobile apps compete creatively through application products that are displayed in the play store and app store. In the past few decades, advanced equipment has always been separated from one another with sophisticated equipment [2]. As an example is the camera and mobile phones in ancient times apart but now has become a unity that supposedly mandatory.

Humans cannot be separated from the current technology, information technology into the latest technology so that people can compete in today [3], [4]. Information technology can be either hardware or software. Hardware can we see the sophisticated devices that popping up today in the form of smartphones, electric cars, and so forth. While the software can be applications - applications that we often use to help complete our office work. The rapid technological development is estimated in 2020 as many as 50 trillion devices connected to one another to exchange information and remote control [5].

Facebook is an example of the development of software for social networking sites and is defined as a social utility that aims to connect one person with others who will know its development worldwide [6]. Today's active Facebook users are 1.47 trillion by 30 June 2018 and are active monthly on the same 2.23 trillion users [7]. With Facebook users who continue to grow Facebook will continue to improve the interface design and interaction to facilitate the users to do activities on Facebook. Usability is an essential factor in determining the success of a system interface design [8]. Many
things done to continue to redesign for usability continues to increase and provide a high experience to its users.

![Evolution of the Mobile Phone](image)

**Figure 1.** The growth of Mobile Phones

In the previous study, mobile devices such as iPads and tablets studied were able to increase stimulus for motivation and concentration [9]. This study examines the user experience to test using a questionnaire on the MFolktales mobile app. Another study is to test the user experience to measure by other methods involving the emotional influence of responses that are influenced by visceral, behavioural, and reflective [10].

Furthermore, there is a little research that examines the task analysis of Facebook on young users. This test involves the respondents of the students in the course of Human-Computer Interaction. This is done to see how they feel easy to interact with Facebook they already use in everyday life. Respondents certainly have a Facebook account and do not feel alien to Facebook. This research is expected to provide new information on how easy they interact with Facebook by doing some common tasks done with measured time.

2. Methods

In this study conducted a survey of Facebook users on students who already have the Facebook account. They are asked what menus they often use. After the menu is often used by the users Facebook then the next step is to measure how fast they carry out some tasks that according to these respondents often use.

In this study, a number of 40 students became the object of research as respondents. They use the devices that they used with various brands and series. This aims that they do not have to adapt to the device that they will be used by exercising the task.

3. Result and Discussion

Before the respondents perform the tasks that have been given, the respondent must ensure the internet connection and the device used in normal circumstances, so that nothing - things that can interfere with the activity in progress. Respondents perform tasks one by one then recorded the time. The task that has been summarized become seven tasks as table 1 below.
Table 1. List Of Task Analysis that will be Measure

| No | Task                  |
|----|-----------------------|
| 1  | Like & Comment        |
| 2  | Add Friend            |
| 3  | Login                 |
| 4  | Update Status         |
| 5  | Chat a Friend         |
| 6  | Upload Photo          |
| 7  | Change Password       |

Figure 2. Graph of Times of (a) Login, (b) Update Status

Figure 2.a above can be seen the task to log in on Facebook, the respondents did not look have the same ability. In the next interview session the respondents there who forgot the password because it often utilizes the Facebook application that auto login. In accordance with the rules at the beginning then all respondents must log out from the Facebook application and may not use the auto login facility. This is done to test the memory of the respondents.

Figure 2.b above is the time required respondents to perform status update task with the sentence "update status". The respondents get the same task in terms of typing a sentence that should be written in the new status update field then they submit the status they make. Status updates are not difficult because the status update menu is live on the home page. But the graph looks unstable, this is because there is typing wrong - wrong because of the groggy effect when measured.
Figure 3.a above is the time needed to upload a photo on Facebook. Respondents uploaded a specified photo with an agreed image that is the same image and in the same directory, so the file search time and selecting the image will be on the same perception. The graph is also unstable because the respondents reasoned that when choosing a photo they have difficulty when loading that takes time to open the file manager application. So there is the interaction between Facebook and innate applications of the mobile operating system.

Figure 3.b above is the time it takes the respondents to complete the task "Like & Comment" status of friends who had been made. Because these respondents are already friends with one another on this Facebook, then this is not difficult for them. But again this unstable graph is due because when they will like the status of the friend is closed with the status of other friends which consequently they have to scroll down to find the status of a friend in question. There are other reasons also because they require interaction and get a connection that is not fast so when clicked comment must wait Facebook respond.

![Figure 3.](image1)

![Figure 4.](image2)

(a) Chat a Friend  
(b) Add a Friend

Figure 4.a above is a graph of the time required respondents to complete the task of sending a message to one friend. The respondents were asked to send a quick note with the word "Chat a friend". All have been uninformed to make the same perception among respondents. This graph is not stable because there are respondents who have chosen a friend who will be invited to chat but did not appear - so there is an unresponsive interaction when respondents will invite to break into one of his friends.

Figure 4.b above is the time it takes the respondents to add friends that do not exist in their friendship. With the perception of the equation then there is the name of a colleague who the majority has not happened friendship with the respondents. For those already then the respondents are asked to unfriend him. So all respondents have the same perception to add one friend who has been determined. It does not take long, but this unstable graph is due to some interaction that takes time when the respondents enter the keyword name, so it does not appear immediately. But the average time required is quite small that is 10.8 seconds.
Figure 5. Graph of Times of Change Password

Figure 5 above is the time required by the respondents Facebook users to change the password. This is the last task performed during the test. Respondents need an average time longer than the previous one. The job of changing this password takes a long time because the interaction is implemented through several stages. With these non-instant stages, the additional respondents rarely to do this activity of course for the respondent takes a long time to find the menu associated with changing the password. There are even respondents who have to open a help facility to find steps how to change the password.

The result of the average task analysis of these seven tasks can be seen in Figure 6. Figure 6 has been sorted from the smallest time to the longest time. It can be seen that "Like & Comment" requires a very short time. Although it is not far adrift with the other tasks four tasks include requiring almost equal time. This almost balanced time is due to the interaction of the respondents to do the job too little. In contrast to the task of uploading photos and changing passwords they have to take a few steps before they can complete the task, and at certain steps have to wait for the response from the device and internet connection.

Figure 6. The result of Time Average Task Analysis
4. Conclusion
The conclusion of this study is that Facebook users who are not given a chance to try the tasks that tested the easiest is "Like & Comment" with an average time of 10.72 seconds. Very thin time is different from the "Add a friend" task with an average time of 10.80 seconds. This time difference is due to the task add friend must find the name of the friend to be searched first, so still, the access requirement becomes very important for loading time. So the short time task in this task is that it involves a little process with little interaction as well.

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