INTERACTIVE USER INTERFACES IN THE DIGITAL WORLD MAKE THE APPLICATION ATTRACTIVE AND EASIER FOR USER ACCESS

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ABSTRACT

In today's digital era, Indonesian people rely heavily on electronic media as a tool to support life. The digital era, accompanied by the development of advanced technology, has proven to have a good impact on the people of Indonesia. When talking about electronic media, one cannot skip discussing the digital world. The digital world is a representation of cyberspace that can make it easier for Indonesian people to access applications or websites. Intermediary tools used in accessing the digital world are electronic media, such as mobile phones, laptops, and so on. In an application, of course, there are various components in it, for example, such as the User Interface (UI). User Interface (UI) has functions to connect users with the system. The ease and effectiveness of the User Interface (UI) in an application/website have a very large impact on user interest in using the application/website, where this interest can encourage user confidence to always use it. This has been proven by 45.1% of 110 application users who strongly agree with the statement that the efficiency of a User Interface (UI) greatly influences user comfort in carrying out an activity with the system. This study uses literature study, observation, and quantitative research methods. The existence of an interactive User Interface (UI) in the digital world makes the application/website look attractive and makes it easier for users to access.

Keywords: *Application Digital, Electronics, User Interface, Website, Interactive User*

1. INTRODUCTION

The User Interface (UI) is a bridge between the world of a product or system and the world of the user [1] The interface is a medium that connects communication between two entities, namely systems and humans, where the User Interface (UI) plays a crucial role in the form of being responsible for representing every activity of the two entities. In everyday life, humans can interact with objects around them through this interface [2].

A good user interface design on a website will make users feel comfortable and spend a lot of time on the application/website. On the contrary, if a User Interface (UI) design has poor quality on the application/website [3], then this can make users feel uncomfortable and uninterested in using the application/website. Therefore, the User Interface (UI) is the most important component in an electronic media or digital world [4]. According to Fadeyev, design in User Interface (UI) not only categorizes buttons and menus as components but also categorizes interactions between the user and the application [5]. This states that User Interface (UI) design does not only prioritize the appearance of an application/website but rather refers to how an application/website has good quality in carrying out the process [6]. For example, thinking about how to design a notation or element so that it can function optimally and effectively when compared to just choosing a shape or size without thinking long about the application/website in the future [7].

This theoretical investigation discusses the role of the User Interface (UI) in its application to the digital world. This research was done based on the method

of literature study and observation with the aim of obtaining and collecting accurate and validated data as research reference material.

TABLE I.   RESEARCH ASPECT

User Interface
Utility
Usability
Usefulness

The table above describes 3 aspects of research regarding the User Interface (UI) where these 3 aspects are very important in the continuity of a process from the application system/website to the user.

The results to be obtained in this study will have a big impact, especially on User Interface developers to implement a good User Interface (UI) to implement and develop, besides that the results in this study can provide broad insight to those who read it because there are various kinds of concrete data regarding the effectiveness of a User Interface (UI) in certain applications/websites. Therefore, we can find out how far the role of the User Interface (UI) is in the daily life of users in the digital world.

2. LITERATURE REVIEW

A. User Interface

User Interface (UI) is a visual display that shows human-computer interaction in a product. The product can be in the form of a website, application, or anything digital that has a visual display. In other words, a User Interface (UI) can be described as a display that includes shapes, colors, and writing that is made interesting and can be used to make it easier for users to use a product [8]. The User Interface (UI) is a collaboration between graphic elements and a navigation system. The User Interface (UI) is also part of the information system component by involving input and output, which involves humans and the system.

The User Interface (UI) requires input from the user so that the system can provide output. The User Interface (UI) is also an effective tool for designing a user-focused front-end in a system to appear proficient. The User Interface (UI) is a visual display of a system that focuses on the use and beauty of a design on an application/website. Where this is an accurate strategy for making an application/website optimally so that the User Experience (UX) can be more optimal.

B. Digital World

The definition of digital technology itself is a technology that includes information technology that prioritizes how to reach it using computer-based devices. Digital technology tends to refer to the application of operations carried out automatically and sophisticatedly where a computer system can read a coding regarding computerization, both of which is progress and development from the world. These technological developments bring positive things to the effectiveness, efficiency, and quality of data. For example, components and colors in a system are becoming increasingly diverse and have clear quality.

C. Utility

The utility is a component in the User Interface (UI) that plays an important role in the success of a User Interface (UI) [9]. The impact on user satisfaction and interest when using it. The utility of the product also matters because it measures the rate of return of users in an effective way [10].

D. Usability

Usability is another key to building a good User Interface (UI). Usability itself functions to ensure whether the user uses the application/website according to the procedure. Here, the role of the User Interface (UI) will be seen by looking at the response from the user's understanding of using the application/website [11]. The usability of a product is very important to make the user think that the product is easy to use [12].

E. Usefulness

After utility and usability are implemented in a User Interface (UI) [13], these two components will produce a new component in the form of usefulness. Usefulness serves to ensure the role of implementing all components involved in digital computing. In this component, the role of the User Interface (UI) will be seen by how much confidence the user has in the application/website.

3. METHODOLOGY

The research model used for this research is the descriptive analytics model. This research aims to validate the theory of User Interface (UI) usage based on its effectiveness in implementing its components of it and also to know the user's satisfaction with the User Interface (UI) implementation these days. With the descriptive analytics model, this research aims to find out the usage, efficiency, etc, by describing it in detail based on facts with a questionnaire as the medium [14]. Besides descriptives analytics models, this research

about "The Role of The User Interface in The Digital World" also uses a quantitative research method. By using this method, there is a lot of data mining contained in this research. Also, many respondents participated in this research.

Using the quantitative research method, all the data will be processed and analyzed with numeric data. This can be used to find patterns and averages, make predictions, test casual relationships, and generalize results to bigger and broader people. Respondents who contribute input various kinds of data provided from numbers on a scale of 1 – 5, where the data will produce a concrete relevance and score. This research also uses a literature study to be a reference material regarding the material presented based on previous research that has been verified. As mentioned earlier, the instrument used in this research is the questionnaire because if a researcher uses this instrument, it can reach a large number of respondents in a short time so the questionnaire instrument can be classified as effective. And the important is that all the data that is collected is all based on real data, so the research will also make real results that can be used for further consideration and decision.

This chapter will explain the research model and characteristics of the respondents.
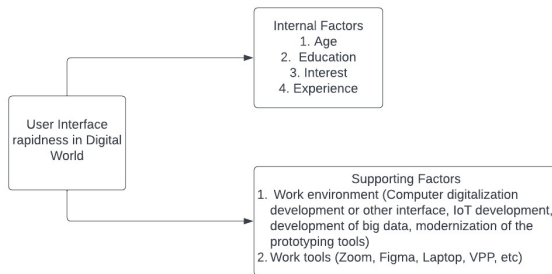
A. Research Model

Figure 1. Model Analysis.

In the figure above, some factors affect the rapid role of the User Interface (UI) in the digital world [15]. Namely, there are two factors, Internal and Supporting; these two factors come from different scopes. Where internal factors come from within the user in applying the User Interface (UI) [16] and supporting factors that come from the user's environment can affect the rapid development of the User Interface (UI) [17]. The word hypothesis comes from two words, namely the word hypo, which is defined as "less than," and the thesis, which is defined as "opinion". From the meaning of these two words, it can be concluded that a hypothesis is an

opinion or conclusion that is not final and must be tested for truth. This research was conducted to find out the important role of the User Interface (UI) in the digital world by focusing more on the interests that the participants want to develop [18]. The following is the formulation of the hypothesis of this study:

H0: User Interface (UI) has an important role in the digital world.
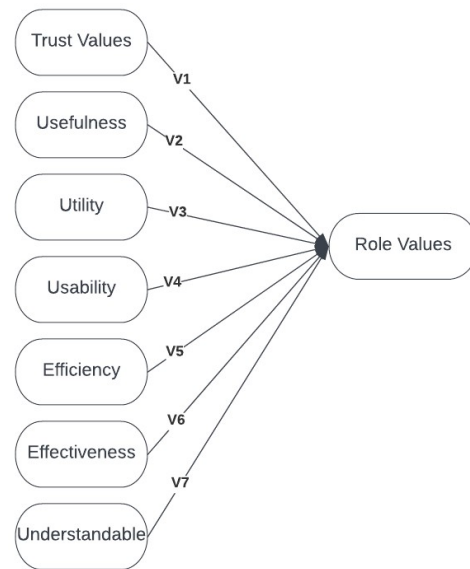H1: User Interface (UI) does not have an important role in the digital world.

Figure 2. Hypothesis

The word hypothesis comes from two words, namely the word hypo, which is defined as "less than," and thesis, which is defined as "opinion". From the meaning of these two words, it can be concluded that a hypothesis is an opinion or conclusion that is not final and must be tested for truth [19].

This research was conducted to find out the important role of the User Interface (UI) in the digital world by focusing more on the interests that the participants want to develop. The following is the formulation of the hypothesis of this study:

H1: Trust Values have a positive effect on Role Values.
H2: Usefulness has a positive effect on Role Values.
H3: Utility has a positive effect on Role Values.
H4: Usability has a positive effect on Role Values.
H5: Efficiency has a positive effect on Role Values.
H6: Effectiveness has a positive effect on Role Values.

H7: Understandable has a positive effect on Role Values.

1) Respondent's Characteristics

In validating research on the important role of the User Interface (UI) in the digital world, research was conducted in the form of a questionnaire system on a number of respondents who use electronic devices in their daily lives [20]. The technique for taking this questionnaire used a purposive sampling technique; the number of respondents who contributed to this study was 110 respondents, with the following details:

TABLE II.   *List Of Respondents*

No	Gender	Relevancy	Score (%)
1	Male	45	40.9
2	Female	65	59.1
	Total	**110**	**100%**

4. RESULT AND DISCUSSION

The research was conducted by receiving responses from users by filling out a questionnaire in the form of a Google Form regarding their responses to the role of the User Interface (UI) in the digital world. The questionnaire created by the researcher used a Likert scale answer type. The type of Likert scale answer serves to find out how much the frequency of the role of the User Interface (UI) plays a role in the life of the user. The implementation of the Likert scale is explained by the largest scale to the smallest scale. The order of the answer choices on the Likert scale is as follows:

TABLE III.   *Likert Scale*

Answers	Score
Very Agree	5
Agree	4
Quite Agree	3
Disagree	2
Very Disagree	1

Resource*:* Budiaji, W. (2013) [21]

After the respondent has filled out the questionnaire that the researcher gave, the researcher analyzes the response from the respondent and can conclude the relationship between the role of the User Interface (UI) and the effectiveness of the User Interface (UI) in its operation in the digital world. The following table describes the two most important statements about our research based on Likert Scale:

TABLE 4. *Questionnaire Crucial Result*

Statement	Relevancy					Score (%)				
	1	2	3	4	5	1	2	3	4	5
Is User Interface (UI)/design very important in the digital world?	0	0	14	44	52	0	0	12,7	40	47,3
In your opinion, does the User Interface (UI) greatly affect the level of efficiency in the digital world?	0	1	10	39	41	0	1,1	11	42,9	45,1

In the table above, it can be concluded that 47,3% (52 respondents) strongly agree that the User Interface (UI) plays an important role in the digital world because in today's digital era, many people use electronic media in their daily lives. Not only that, they assumed that User Interface (UI) help them understand electronic media more easily and effectively. Therefore, the level of usability of an interface that contains convenience, understanding, use, and effectiveness is key in the digital world, especially regarding the design of an application to make it look attractive. The great User Interface also creates a better User Experience (UX) with great usability of the product so that not only attractive but the user can use it easily. By doing that, automatically will create a product that is useful for the user.

In addition, 41 respondents strongly agree with the scale 5 indicators that the role of the User Interface (UI) has a very high level of efficiency in the use of digital world media, so it can be concluded from this data that users will feel engaged with an

application if the User Interface (UI) in the application looks attractive, not long-winded, and effective in its application operation. After getting the results regarding the role of the User Interface (UI) in the digital world, we can conclude the important points that can increase the effectiveness of the role of the User Interface (UI) in the digital world by making a figure like the following:
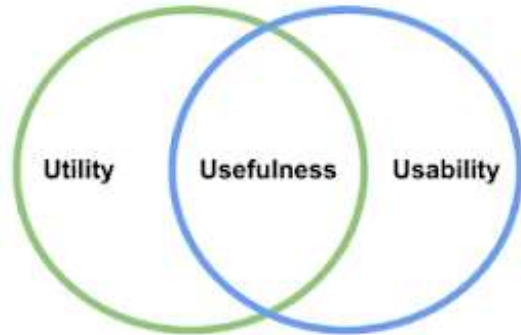

Figure 2. Usability And Utility Form The Usefulness Of The User Interface (UI).

The figure above explains the three keys to the successful outcome of the User Interface (UI) role in the digital world where electronic media is the intermediary.

- First, utility in this aspect is a range of functions of the digital world based on respondent's satisfaction and interest in the User Interface (UI) in electronic media.
- Second, usability is the effectiveness, convenience, and understanding of the User Interface (UI) respondents felt when using the application.
- Third, usefulness is the respondent's belief in using an electronic media/digital world based on the User Interface (UI).

Based on this description, the level of utility and usability of the User Interface (UI) plays an important role in generating the level of usefulness/trust of an application, because this will make respondent's feel comfortable using the digital world if the designed staked has taken and implementing the three success ways of the User Interface (UI) role. Namely, utility, usability, and usefulness. Based on the results obtained from this research, we can provide a calculation regarding the average value of a statement regarding the efficiency of the User Interface (UI) in carrying out its role as an interface in the digital world, and the calculation can be calculated as follows:

$$X = \frac{(S5xF) + (S4xF) + (S3xF) + (S2xF) + (S1xF)}{N}$$

(1)

Description:
X = Average score of statements
S5-S1 = Score on a scale of 1 – 5
F = Total frequency of answers
N = Total of all frequencies

The results of these calculations can determine the average score of statements, whether a statement is in the category of strongly agree, agree, quite agree, disagree, or strongly disagree. The validity rating of a statement is based on this calculation because if it has been calculated, the data is already concrete.

A. *Readability test*

The Readability test is made to make sure all the questions in the questionnaires are understandable for all the people that are going to be respondents to the questionnaires. This also makes sure that the answers can be used for the research.

TABLE IV. *READABILITY TEST*

No	Questions	Yes	No
1	Full Name	✔	
2	Age	✔	
3	Gender	✔	
4	Are you a user of social media or anything about digital world?	✔	
5	Do you often use digital platforms? (Example: social media, websites, online games, etc.)	✔	
6	In your opinion, is the design of an application or platform very important?	✔	
7	Do you think the design of an application or platform has a big effect on the comfort for the users?	✔	
8	Have you ever heard of the User Interface (UI)?	✔	
9	Do you know the User Interface (UI) well?	✔	
10	Do you understand the digital world in everyday life?	✔	
11	Is the User Interface (UI) really needs to be used?	✔	
12	Do you think a neatly organized User Interface (UI) can make users more interested?	✔	

13	Will attractive User Interface (UI) make the process of the application or platform more effective?		
14	In your opinion, does the User Interface (UI) has affect the level of efficiency of use in digital world?		
15	Is the User Interface (UI) the main factor in implementing the efficient use of the digital world?		
16	In your opinion, is the User Interface (UI) unable to influence users in the digital world?		
17	Have you ever thought about learning the User Interface (UI)?		
18	Are you interested in learning the User Interface (UI)?		
19	Do you think the User Interface has its own challenges to learn?		
20	Does the User Interface (UI) need to be studied as early as possible?		
21	Does learning the User Interface (UI) take a long time?		

After the questionnaires have been shared and filled in by the respondent, all responses will be collected, and the data will be used for every research needs.

5. CONCLUSION

After researching the importance of the role of the User Interface (UI) in the digital world, it can be concluded that currently, everything that is electronic, especially websites or applications, requires a good User Interface (UI). A good User Interface (UI) is an interface that has an attractive appearance, simple but also useful so that it can create a good User Experience (UX) for users.

In order to make a good User Interface (UI), we need to pay attention to several aspects, such as utility and usability, which are mentioned before. The utility is the component that ensures the design of a User Interface (UI) that provides the features a user needs and is also suitable for the user. In other words, provide the user with a visual design that has all the features that users want. Then, usability ensures that the User Interface (UI) has an appearance that can be aligned with its function. In other words, the User Interface (UI) must provide

functions that users need in the first place. After two components are created, the User Interface (UI) will automatically create a component called usefulness. Usefulness means that the User Interface (UI) has successfully created a visual that is good for users but also helps the user to understand more easily.

After the questionnaire that had been filled in by the respondent was closed, the researcher got the results of the questions given, including:

2) Respondents use social media or the digital world

There are 65.9% or the equivalent of 60 respondents who are users of social media or the digital world. The remaining 27.5% (25 respondents) chose a scale of 4 (agree), and 6.6% (6 respondents) chose a scale of 3 (quite agree).

3) Frequency of respondents using digital world platforms

There are 66.4% or the equivalent of 73 respondents who often use digital world platforms. The remaining 25.5% (28 respondents) chose a scale of 4 (agree), 7.3% (8 respondents) chose a scale of 3 (quite agree), and 0.9% (1 respondent) chose a scale of 2 (disagree).

4) Respondents' responses regarding the importance of design in an application or platform

There are 64.8% or the equivalent of 59 respondents who think that the design of an application or platform is very important. The remaining 29.7% (27 respondents) chose a scale of 4 (agree), and 5.5% (5 respondents) chose a scale of 3 (quite agree).

5) Respondents' responses regarding the influence of design on user comfort

There are 70.3% or the equivalent of 64 respondents who think that the design of an application or platform influences user comfort. The remaining 24.2% (22 respondents) chose a scale of 4 (agree), 3.3% or the equivalent of 3 respondents chose a scale of 3 (quite agree), and 2.2% (2 respondents) chose a scale of 2 (disagree).

6) Whether or not the respondent has heard of the User Interface (UI)

29.7% (27 respondents) have heard of the User Interface (UI). The remaining 34.1% (31 respondents) chose a scale of 4 (agree), 18.7%, or the equivalent of 17 respondents, chose a scale of 3 (quite agree), 8.8% (8 respondents) chose a scale of 2 (disagree), and 8.8% or equivalent with 8 respondents choosing a scale of 1 (very disagree).

7) Respondents know the knowledge of User Interface (UI) well

There are 25.3% or the equivalent of 23 respondents who know the user Interface (UI) well. The remaining 25.3% (23 respondents) chose a scale

of 4 (agree), 27.5% (25 respondents) chose a scale of 3 (quite agree), 16.5% (15 respondents) chose a scale of 2 (disagree), and 5.5% (5 respondents) choosing a scale of 1 (very disagree).

8) Respondents understand the use of the digital world in everyday life

There are 41.8% or the equivalent of 38 respondents who understand the use of the digital world in everyday life. The remaining 34.1% (31 respondents) chose a scale of 4 (agree), 16.5% (15 respondents) chose a scale of 3 (quite agree), 6.6% (6 respondents) chose a scale of 2 (disagree), and 1.1% (1 respondent) choosing a scale of 1 (strongly disagree).

9) Respondents' responses regarding the User Interface (UI) need to be used

There are 47.3% (43 respondents) think that the User Interface (UI) needs to be used. The remaining 39.6% (36 respondents) chose a scale of 4 (agree), and 13.2% (12 respondents) chose a scale of 3 (quite agree)

10) Respondents' responses regarding a well-organized User Interface (UI) will make the process of the application or platform more effective

There are 45.1% (41 respondents) think that a well-organized User Interface (UI) will make the process of the application or platform more effective. The remaining 39.6% (36 respondents) chose a scale of 4 (agree), 14.3% (13 respondents) chose a scale of 3 (quite agree), and 1.1% (1 respondent) chose a scale of 2 (disagree).

11) Respondent's responses regarding the User Interface (UI) affect the level of efficiency of use in the digital world

There are 45.1% or the equivalent of 41 respondents who think that the User Interface (UI) affects the efficiency of use in the digital world. The remaining 42.9% (39 respondents) chose a scale of 4 (agree), 11% (10 respondents) chose a scale of 3 (quite agree), and 1.1% (1 respondent) chose a scale of 2 (disagree).

12) Respondents' responses regarding the User Interface (UI) cannot influence users in the digital world

There are 18.7% (17 respondents) who think that the User Interface (UI) cannot influence users in the digital world. The remaining 25.3% (23 respondents) chose a scale of 4 (agree), 24.2% (22 respondents) chose a scale of 3 (quite agree), 20.9% (19 respondents) chose a scale of 2 (disagree), and 11% (10 respondents) choosing a scale of 1 (strongly disagree).

13) Respondents' interest in learning the User Interface (UI)

There are 28.2% or the equivalent of 31 respondents who are interested in learning the User Interface (UI). The remaining 42.7% (47 respondents) chose a scale of 4 (agree), 23.6% (26 respondents) chose a scale of 3 (quite agree), 4.5% (5 respondents) chose a scale of 2 (disagree), and 0.9% (1 respondent) choosing a scale of 1 (strongly disagree).

From the results of the research questionnaire that was previously described, the researcher can conclude that the User Interface (UI) for users plays an important role in the digital world. With a good and adequate User Interface (UI), an application or platform will be more accessible and understandable to users.

In addition, with a good User Interface (UI), the efficiency and effectiveness of using the application or platform will increase. Users will prefer to use applications or platforms that are easy to use but have functional features. Therefore, User Interface (UI) is very important in the digital world. It has been discussed before that in the digital era, like today, the User Interface (UI) is very important and useful. However, currently, there are only a few government programs that teach knowledge about User Interface (UI) to high school students. For the most part, User Interface (UI) knowledge is learned and deepened while in college. It would be nice if the government started designing programs that would deepen computerization knowledge, especially User Interface (UI) knowledge for high school students, which of course this knowledge would be useful in the future.

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