

USER EXPERIENCE PERCEPTION OF ANDROID-BASED THERAPIST SPA RESERVATION APPLICATION (A CASE STUDY OF BABY SPA APPLICATION USERS)

CARUDIN¹, UWAY WARIAH², ASEP JAMALUDIN³, NELLY APRININGRUM⁴, AND DADANG YUSUP⁵

^{1,3,5}Departement of Faculty of Computer Science, Universitas Singaperbangsa Karawang, Indonesia

^{2,4}Departement of Faculty of Health Sciences Universitas Singaperbangsa Karawang, Indonesia

E-mail: ¹carudin@staff.unsika.ac.id, ²uway.wariah@fkes.unsika.ac.id, ³asep.jamaludin@staff.unsika.ac.id,

⁴nelly.apriningrum@fkes.unsika.ac.id, ⁵dadang.dyf@staff.unsika.ac.id

ABSTRACT

The increasing public demand for homecare baby spa services has made business actors in this field start trying to compete online in providing the best services and services. Efforts are made especially in the use of information technology for the context of media marketing, one of which is using application media. Applications that are currently believed to be able to reach a broad market so that they require more attention, especially in terms of design and content, this is because design and content can provide a user experience so that they are interested in using the application. This study is to identify the application of the User Experience (UX) concept to the baby spa therapist reservation application, so that it can be a reference for future developers who want to develop similar mobile applications. Statements for respondents are based on 4 fundamental UX variables, namely Value, Adoptability, Desirability and Usability which are made on a Likert Scale. Statistical methods used are validity and reliability tests. Furthermore, the results of the questionnaire are presented in the form of descriptive analysis based on the four UX variables. Meanwhile, to find out the most important fundamental UX elements, the "YES & NO" classification method is used. Based on the research results, it is known that the user experience variables that are most considered important by respondents are the value, adoptability and desirability variables. This is because people use this baby spa application to reserve a baby spa therapist, it is very easy to learn, has an attractive visual design and is easy to access.

Keywords: *Baby Spa, User Experience, Information Technology, Fundamental UX Variables*

1. INTRODUCTION

The development of the digital era which is increasingly rapid at this time encourages people to increasingly like online business, this is due to the ease of accessing transactions that can be done anywhere and anytime. So that makes entrepreneurs develop various kinds of applications that can reach, attract sympathy and satisfaction of their customers so that they continue to use their products in the midst of technological advances. This condition requires application developers to create applications that can be opened easily and comfortably on a smartphone. By implementing a good user experience design, there will be an increase in user satisfaction [1].

User experience was introduced in the mid-1990s by Donald Norman. User experience can be

described simply as we choose a place to eat. The reason we chose that place, the first impression when we first entered, the welcome we received from the waiter, the organized menu, the food serving time, the taste of the food, customer service, do we feel at home, will we come back to that place again, is the scope of user experience from the place to eat [1].

Frank Go then describes the concept of user experience into a conceptual framework that describes four elements, namely: value, usability, desirability, & adoptability and describes the four elements interacting with each other in encouraging better product design [2].

The principle of user experience, in its development, can be applied to digital marketing. Digital marketing is one of the factors that become the success of a company in marketing their

products. The advantage of using digital marketing is that it is easy to see and monitor sales results, with digital marketing also having the advantage of being fast in seeing the level of customer response and measuring the success rate of marketing activities in real-time, making it easier to plan the next marketing strategy [3].

The application of digital marketing has been carried out at a startup company that develops an android-based baby spa application, this application is used to make it easier for the public or users to find information, and order products/services for baby spa therapist reservations.

The user experience design of the baby spa application is interesting to learn and imitate for novice developers who want to make similar applications, from the description above, the author is interested in discussing the user experience elements: value, desirability, adoptability, & usability in the baby spa application with the title "Perception User Experience on Android-based Therapist Spa Reservation Applications (Case Study of Baby Spa Application Users)".

This research is in line with lecturers in the field of Information and Communication Technology in developing ICT platforms to make it easier for people to find information, market and order products/services. The Roadmap for Study Programs and Faculties is of course in line with the University roadmap in the field of community development through science and technology innovation based on local wisdom

2. LITERATURE REVIEW

2.1. User Experience

According to the definition of ISO 9241-210, User Experience is a person's perception and response to the use of a product, system, or service. User Experience (UX) assesses how satisfied and comfortable a person is with a product, system, and service. A principle in building User Experience is that the audience has the power to determine the level II-6 of their own satisfaction (Customer Rule). No matter how good the features of a product, system, or service, without the intended audience being able to feel satisfaction, rules, and comfort in interacting, the level of User Experience will be low. The development of the digital and mobile world makes User Experience more complicated and multidimensional. Now one can access a website from various devices [4]

To get a good User Experience, a product must have a match between product features and user

needs. This then determines the product is valuable or valuable. Next, if the product is easy to find and easy to use the first time, then the product can make users feel happy when using it. And lastly, the product must be easy to use to accomplish or do the things the user wants. These are the four elements needed to get a good user experience. [2]

2.2. Baby Spa

Spa is an abbreviation of the Latin word which comes from the word Solus Per Aqua (Solus = Treatment or Treatment, Per = With and Aqua = Water). Based on this meaning, it can be said that spa is a system of treatment or treatment with water or in English known as Hydrotherapy. But now the Spa has been developed also to be done on babies (Baby Spa). [5]

2.3. Android Application

Application In terms of understanding the application is a program that is ready to use which is made to carry out a function for users of application services and the use of other applications that can be used by a target to be addressed. According to the executive computer dictionary, application has the meaning of problem solving that uses one of the application data processing techniques which usually races on a desired or expected computing or expected data processing. The definition of application according to the Big Indonesian Dictionary, "Application is the application of system design to process data using the rules or provisions of a particular programming language" [6]

Android is a Linux-based operating system designed for touch screen mobile devices such as smartphones and tablet computers. Android was originally developed by Android, Inc. with financial support from Google, which later purchased it in 2005 [7].

2.4. The Four Elements of User Experience

In making a good application design, a reference framework is needed in the form of User Experience theory which is useful in providing a reference for the results obtained from the user experience after using the application. According to Frank Guo [2] states that value, adoptability, and desirability have a greater effect on the first order, while usability has a larger effect on the second order. Where the ability of users to complete their tasks thoroughly is the determining factor of their experience.

a. Value

Elements that represent the fulfillment of the criteria needed to create an application that is intended for the business sector. Value can also measure the results of the analysis of the emotional value of the user experience when using the application and measure the integration of various application functions.

b. Adoptability

Elements that represent the reason for using the application, whether the application is mandatory to use and becomes a requirement where it can be obtained and installed or easy to operate.

c. Desirability

Is an element that underlies the reason why the application is desired related to the clarity of presentation, suitability of appearance and use and use of the content contained therein.

d. Usability

Representing elements in knowing the function, content, ease of viewing the layout and finding information and fulfillment of the existing system representation in the application. Each element that has been described above by definition, becomes a reference in making user experience element variables that will be asked in the questionnaire.

2.5. Sampling Technique

The sampling technique used in this research is to use purposive sampling technique (samples aimed) meaning that the sample is not intended to represent the population, but to represent information. If in quantitative research the sample must represent the population, for example there is a clear formula for sampling, but in qualitative it is not based on that consideration. This means that when qualitative researchers want to examine a community in an area, the informants that can be taken may be limited, the important thing is that the information is considered to represent the information as a whole. [8]

The qualifications of research informants are as follows:

- a. Have experience as a baby spa application user
- b. Having a great interest (high priority) in the use of the baby spa application, namely daily dealing with the problems being researched.

2.6. Likert scale

Likert scale is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena [9]. In this study, respondents will be given a positive statement. To assess the score can be described as in Table 1 Rating Scale for Positive and Negative Statements.

Table 1: Likert scala

Information	Score
Strongly agree	4
Agree	3
Do not agree	2
Strongly Disagree	1

2.7. Instrument Testing

Instrument testing is carried out to test the level of accuracy in the use of measuring instruments and the extent to which measuring instruments can be trusted, then two tests are used, namely validity tests and reliability tests. The validity test is used to determine the validity of the statements made, and the reliability test is to find out how reliable the answers from respondents [1]

3. RESEARCH METHODOLOGY

The research method used in this study is to use quantitative descriptive methods in the form of structured and systematic explanations, both static and descriptive which explain the user experience when using the baby spa application. Initially, a literature study will be carried out and will be continued on a needs analysis. After that, data collection will be carried out and then data processing will be carried out. After that, it will proceed to the analysis and proposed improvements. These stages, if used as a diagram, can be seen in Figure 1.

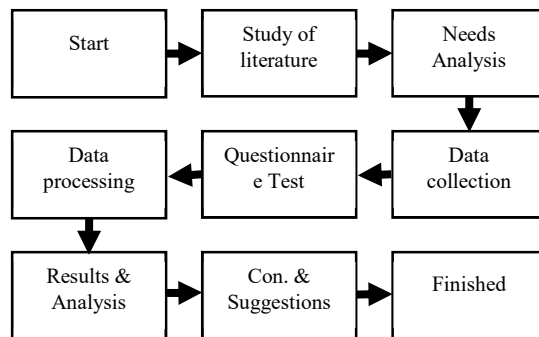


Figure 1 Research design

3.1. Literature Study

After formulating the problem, then looking for literature studies related to topics that support problem solving in this research. Literature studies are obtained through papers, journals, books and research on the same topic, which is related to the mobile user experience that has been done previously. The literature study used can be used as a theoretical basis in conducting research.

3.2. Needs Analysis

In this phase, detailed research of the needs is carried out in the form of information about the questionnaire that will be used covering four UX variables because the questionnaire is a combination of the required statements that represent the four variables. Then the next step is to determine the right respondents and the number of respondents needed for testing research instruments.

Testing of research instruments was carried out in two stages of testing. The first test is done by testing the validity. The second test, carried out with a reliability test. The number of respondents in the validity test was 30, and the reliability test was 100. The selection of these participants was chosen based on the respondents who were representative.

3.3. Data Collection

Data collection was carried out in two stages of testing. The first test is testing the accuracy of the measuring instrument (questionnaire statement) so that it is called valid. Then this data collection was continued with the second test, namely to find out how far the measuring instrument (respondent's answers) can be trusted. All tests were carried out by distributing questionnaires which were developed from the indicators of each variable. Questionnaires were distributed manually to 100 respondents. Questionnaire data will be taken by allowing respondents to fill out the available questionnaires. Data collection was carried out to support the results of the analysis.

3.4. Questionnaire Test

The questionnaire testing was carried out in two stages. First, to find out if each the questions asked to the respondents are valid.

The second stage is to test the respondents' answers. This is to ensure that the answer can be trusted.

3.5. Data Processing

Data processing is done by calculating the average value of each attribute. After that, find the average of the overall parameters of each indicator in it. The data from the questionnaire will be calculated on average through the Likert Scale value on the questionnaire. After that, the highest value is searched for each attribute. This value will determine each UX variable, which is a factor that causes a baby spa application to become popular in terms of user experience (UX).

3.6. Results and Analysis

In this phase, the author will analyze the results of the questionnaire data to get positive and negative responses from respondents. Negative responses were seen from the number of answers Disagree (1) and Strongly Disagree (2). Positive responses are seen from how many answers Agree (3) and Strongly Agree (4). The most Agree answers will show which indicators have the most influence in a UX variable. From this, the two most important variables in the user experience of the baby spa application will be found.

3.7. Conclusions and Suggestions

At this stage, we will discuss the conclusions that can be drawn from the end of this research and it is hoped that the conclusions generated can answer the problem formulation that has been described previously. In conclusion, it will answer all the questions that exist in the formulation of the problem so that it is expected to be input for the baby spa application developer.

In addition, suggestions obtained from this study will also be mentioned for further research.

4. RESULTS AND DISCUSSION

4.1. Results

a. Validity Test

The validity test aims to determine the ability of the 19 statements that have been submitted to the respondents whether they are valid or not. The validity test was applied to the questionnaire statements of 30 respondents. The data that has been collected is then calculated for each attribute by calculating the average (r count) of the Likert Scale using SPSS tools.

The average value (r count) generated for each attribute will be compared with the value of r table (0.361). If the average value of the item is below the table r value, then the item is invalid and

cannot be used for the next stage. Conversely, if the average value of the item is above the value of r table, then the item can be used to perform a reliability test. This validity test proves that the 19 statements are valid. Thus, the statement can be used and proceed to the reliability test stage.

b. Reliability Test Results



Reliability test is a stage to find out how reliable the answers from respondents. The instrument tested is the result of the validity test which produces valid statements or the calculated r value above the r table value (0.361). Before conducting the reliability test, a questionnaire with valid statements will be distributed to respondents, the data that has been collected is calculated using SPSS tools. From the results of the SPSS tool calculation facility, it was found that the results of the reliability test measurement resulted in a Cronbach Alpha with a value of 0.938.

Cronbach Alpha is a general measure of the internal consistency of a multi-item scale. With this, the Cronbach Alpha value is declared good because it is above 0.8 [10], so it is known that the answers from respondents can be trusted (reliable).

a. Baby Spa App

The result of the implementation of this research is an application that is made based on a needs analysis which is then designed, coded, and implemented. This baby spa therapist reservation application is based on Android which can be downloaded via the Playstore. The appearance and how to use the baby spa therapist reservation application can be seen in table 1 below.

Table 1 Baby Spa App

Description	Caption
The main screen when the application is used displays a list view of the baby spa therapists, the therapist search form by area, the help menu and a slide show banner that provides application information.	
In the therapist's list view, it displays the profile photo, name, address of the baby spa therapist. In the list view there is also a select button that serves to select the therapist performed by the application user.	

The second display is when the application user has selected the therapist in the list view. This view contains the name, service schedule, address and types of services provided by the baby spa therapist. Then on this display there is a reservation button that users can use to make reservations or reservations for baby spa therapists.

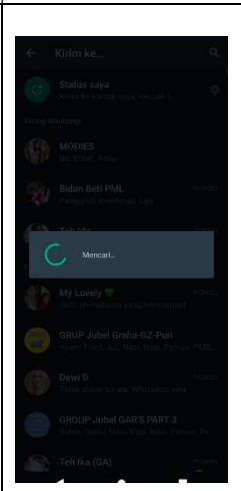


The reservation form display will appear when the user has pressed the reservation button on the second page. This reservation form contains the patient's or user's name, mobile number, address and address reference.



The reservation form will then be saved and direct to the massage therapist's whatsapp when the user clicks the reservation button on the form.


The reservation form display will appear when the user has pressed the reservation button on the second page. This reservation form contains the patient's or user's name, mobile number, address and address reference.



The reservation form will then be saved and direct to the massage therapist's whatsapp when the user clicks the reservation button on the form.

The reservation form display will appear when the user has pressed the reservation button on the second page. This reservation form contains the patient's or user's name, mobile number, address and address reference.

The reservation form will then be saved and direct to the massage therapist's whatsapp when the user clicks the reservation button on the form.



4.2. Discussion

a. Value

From each value variable statement, it was found that the results of the analysis showed that statement number 1 (this baby spa application met the criteria in searching for a baby spa therapist reservation) got a score of 80. Then statement number 2 (the functions of the baby spa application are well integrated) gets a score of 82.

Table 2 Variable Value Statement

No	Statement	Score	Indicator
1	The baby spa application meets my criteria for finding and booking a baby spa therapist	80	Product functionality
2	The functions of the baby spa app are well integrated	82	Product features

This shows that the baby spa application has features that match the purpose of the baby spa application, and all of them are well integrated. In addition, the baby spa application has fulfilled most of the user's needs to make a reservation for a baby spa therapist.

b. Adoptability

From each statement of the adoptability variable, the results of the analysis showed statements number 3 (the baby spa application is a mandatory application on my cellphone) and number 7 (I can quickly connect with a baby spa therapist for a therapist reservation as desired) score 82. This is a statement that has the highest positive value over other statements.

Statements number 4 (I was happy to find the baby spa application as one of the baby spa therapist reservation applications to meet my needs) and number 6 (I was able to quickly find out the location of the closest baby spa therapist to me) each got the second highest score, namely with a value of 80.

Table 3 Variable Adobtability Statement

No	Statement	Score	Indicator
3	The baby spa application is a mandatory application on my cellphone	82	Credibility
4	I am happy to find the baby spa application as one of the baby spa therapist reservation applications to meet my needs	80	
5	The baby spa application is easy to find in the "playstore" application and easy to install	79	Ease of access
6	I can quickly find out the location of the closest baby spa therapist to me	80	
7	I can quickly connect with the baby spa therapist for a therapist reservation according to my wishes	82	

This shows that the existence of the application and the ease of getting a therapist are the most important things from a reservation application. In addition, the ease of finding applications and the convenience of knowing the location of the nearest baby spa therapist are also important.

c. Desirability

From each statement of the desirability variable, it was found that the results of the analysis showed that statement number 8 (the content in the baby spa application was clearly presented) got a score of 81. And is the statement that has the highest positive value.

Statements number 13 (this app is awesome) and number 14 (useful for finding and booking baby spa therapists) got the second highest score, with a score of 79.

Table 4 Variable Desirability Statement

No	Statement	Score	Indicator
8	The content in the baby spa application is presented clearly	81	Innovative Visual Design
9	The graphic display in the baby spa application is appropriate, not excessive	78	
10	The use of display colors in this baby spa application is appropriate, not excessive	78	
11	The use of designs, icons, symbols and labels in the baby spa application is appropriate/relevant	76	
12	I feel comfortable using the baby spa app	78	Pleasant
13	This app is awesome	79	Wishes come true
14	This application is useful for finding and booking baby spa therapists	79	

This shows that the content in the baby spa application is presented clearly influencing users in choosing the application. Apart from that, baby spa app is an awesome and useful therapist reservation app for users to search and reserve therapists.

d. Usability

From each usability variable statement, the results of the analysis showed that the statement showed that statement number 15 (I can quickly find out and learn about the functions contained in the baby spa application content) got a score of 80. This is a statement that has the highest positive value over other statements.

Then statements number 16 (I can easily remember how to use the baby spa application) and number 17 and (I quickly became proficient with baby spa applications) both had the second highest positive score with a score of 79.

Table 5 Variable Usability Statement

No	Statement	Score	Indicator
15	I can quickly find out and learn about the functions contained in the baby spa application content	80	Easy to learn
16	I can easily remember how to use the baby spa app	79	
17	I quickly became proficient with baby spa apps	79	
18	I can easily find the therapist information I need on the baby spa app	78	Ease of finding content
19	The color of the baby spa app appeals to me	78	Legibility

This shows that the baby spa application is easy to use. Not only easy to use, the baby spa application can make users quickly become proficient when using it.

e. User Experience

To find out which variables received the most positive responses by the respondents, a questionnaire analysis was conducted. Negative responses were seen from the number of answers Disagree (1) and Strongly Disagree (2). Positive responses are seen from how many answers Agree (3) and Strongly Agree (4).

From these results, it was found that the statements that received the most positive responses from the respondents were:

1. Statement number 2 on the value variable with a score of 82, namely the Product Features indicator.
2. Statements number 3 and 7 on the variable adoptability with a score of 82, namely on indicators of credibility and ease of access.
3. Statement number 8 on the desirability variable with a score of 81, namely the Innovative Visual Design indicator.
4. Statement number 15 on the usability variable with a score of 80, namely the Ease of Learning indicator.

From this, it can be seen that a baby spa application must function according to its purpose so as to provide great value to users based on its features. Like this baby spa application, every feature in this baby spa application supports the purpose of creating the application itself. To make a reservation application similar to this baby spa application, regardless of features, content, and usability, the application must be very easy to find so that it can be installed on a smartphone. In addition, the ease of access to the application is also very important. Innovative design and convenience in reading content so that users can use it. Furthermore, ease of learning is something that this baby spa application must fulfill.

5. CONCLUSIONS

The increasing public demand for homecare baby spa services has made business actors in this field start trying to compete online in providing the best services and services. Efforts are made especially in the use of information technology for the context of media marketing, one of which is using application media. Applications that are currently believed to be able to reach a broad market so that they require more attention, especially in terms of design and content, this is because design and content can provide a user experience so that they are interested in using the application.

The baby spa application in this study is the object of study, where this application is one application that provides android-based therapist spa reservation services. This study aims to determine user perceptions of the use of the baby spa application using the four elements of user experience instrument which was analyzed using quantitative descriptive methods. The output targeted in this research is in the form of a study in an effort to find out the perception of user experience in using the baby spa application, where the results of this study can be used for related entrepreneurs in efforts to develop similar applications.

Based on the results of the analysis of the respondents' answers, it was found that the experience of the baby spa application users is as follows:

1. For the value variable, the most influential factor is product features. The features contained in the baby spa application function and are well integrated so that they are in accordance with the user's needs to make a reservation for a baby spa therapist.
2. For the adoptability variable, the most influential factors are credibility and easy access. These two factors have a high influence on the existence of

applications on the user's smartphone and users can quickly connect with a baby spa therapist for a therapist reservation as desired.

3. For the desirability variable, the most influential factor is the innovative visual design. The content in the baby spa application is presented clearly.
4. For the usability variable, the most influential factor is the ease of learning (learnability). Learnability that is meant is the ease that can be learned even by novice level users to be able to use this baby spa application.

Overall, the user experience variables that are most considered important by respondents are the variables of value, adoptability and desirability. It can be concluded that the main reason for people to use an application for a baby spa therapist reservation is that the application must be very easy to learn. Therefore, the experience obtained must be pleasant, have an attractive visual design, have a good brand perception and be easy to access.

REFERENCES:

- [1] K. C. B. L. F. Rio Donaroe Munthe, "Analisis User Experience Aplikasi Mobile Facebook (Studi Kasus pada Mahasiswa Universitas Brawijaya)," *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, Vols. Vol. 2, No. 7, pp. 2679-2688, 2018,.
- [2] F. Guo, "https://www.uxmatters.com," *uxmatters.com*, 25 April 2012. [Online]. Available: <https://www.uxmatters.com/mt/archives/2012/04/more-than-usability-the-four-elements-of-user-experience-part-i.php>. [Accessed 25 Mei 2021].
- [3] WifiColony, "Pentingnya Digital Marketing," 25 5 2017. [Online]. Available: <https://www.wificolony.com/single-post/2017/08/22/Pentingnya-Digital-Marketing>. [Accessed 25 5 2017].
- [4] M. B. Wiryawan, "USER EXPERIENCE (UX) SEBAGAI BAGIAN DARI PEMIKIRAN DESAIN DALAM PENDIDIKAN TINGGI DESAIN KOMUNIKASI VISUAL," *HUMANIORA*, vol. 2, pp. 158-1166, 2011.
- [5] I. G. A. M. W. Yusari Asih, "Optimalisasi Pertumbuhan Bayi dengan Baby Massage and Spa," *Jurnal Kesehatan*, vol. 10, pp. 276-283, 2019.
- [6] A. Juansyah, "Pembangunan Aplikasi Child Tracker Berbasis Asisted-Global Positioning System (A-GPS) dengan Platform Android," *Komputa*, vol. 1, pp. 1-8, 2015.
- [7] N. S. P. S. Harni Kusniyati, "Aplikasi Edukasi Budaya Toba Samosir Berbasis Android," *Jurnal Teknik Informatika*, vol. Vol.9 No. 1, pp. 9-18, 2016.



- [8] A. P. S. Rizqiyatul Khoiriyah, "ANALISIS PERSEPSI PENGGUNA TERHADAP LAYANAN WEBSITE," in Prosiding Seminar Nasional Manajemen Teknologi XXIII, Surabaya, 2015.
- [9] Sugiyono, Metode Penelitian Kuantitatif, Kualitatif dan R&D, Bandung: Alfabeta, 2009.
- [10] Sekaran, U., 2000. Research Methods for Business: A Skill Building Approach, 3th Edition. America: John Wiley & Sons, Inc.
- [11] W. Setiawan, "Era Digital dan Tantangannya," in Seminar Nasional Pendidikan, Jakarta, 2017.