

Development of Menstrual Multimedia Learning Applications and Its Issues for Muslim Women on Mobile-Based

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INTISARI

Percepatan kemajuan teknologi dan informasi mempengaruhi pergerakan kehidupan manusia, termasuk perempuan dalam segala dinamikanya. Namun terlepas dari semua itu, wanita tidak bisa lepas dari kodratnya bahwa mereka akan selalu mengalami menstruasi atau biasa disebut Haid, yang biasanya datang dari siklus bulanan. Menstruasi masih menyisakan pertanyaan bagi sebagian wanita, khususnya wanita muslim. Tujuannya adalah untuk membantu wanita Muslim memahami dan menjadi panduan mereka tentang menstruasi dan masalah-masalahnya seperti Nifas dan Istihadhah. Tujuan dari penelitian ini adalah mengembangkan sebuah sistem aplikasi pembelajaran Multimedia untuk mengatasi permasalahan Menstruasi bagi Muslimah berbasis mobile. Metode pengumpulan data pada penelitian ini terdiri dari studi pustaka, observasi dan wawancara guna mengetahui kebutuhan sistem yang akan dibangun. Pada pengembangan sistem yang digunakan metode Waterfall yang terdiri dari beberapa tahapan. Lingkup pengembangan dalam penelitian ini dibatasi hanya hingga pada tahap perancangan sistem (Modelling) yang didasarkan dari hasil analisis kebutuhan dari beberapa responden. Hasil penelitian menunjukkan dengan adanya pengembangan sistem pembelajaran multimedia berbasis mobile bagi muslimah dapat memberikan kemudahan dalam memberikan informasi bagi muslimah dalam mempelajari hukum menstruasi dan haid berdasarkan fiqh sesuai ajaran islam. Jadi dapat disimpulkan, aplikasi ini membantu muslimah untuk belajar haid secara islami dan dapat digunakan dimana saja dan kapan saja. Didalamnya terdapat banyak fitur mulai dari penjelasan materi Haid, Nifas, Istihadhah, Hal yang perlu diperhatikan saat haid dll. Aplikasi ini sebagai panduan bagi wanita muslim dalam memahami ilmu ketika mereka dalam masa menstruasi.

Kata kunci: *Aplikasi Pembelajaran, Wanita Muslim, Aplikasi Mobile.*

ABSTRACT

The acceleration of advances in technology and information affects the movement of human life, including women in all their dynamics. But despite all that, women cannot escape their nature and will always experience menstrual or usually called Haid, which usually comes from a monthly cycle. Menstruation still leaves a question for some women, especially Muslim women. The goal is to help Muslim women understand and become their guides regarding menstrual issues such as *Nifas* and *Istihadhah*. The purpose of this study is to develop a multimedia learning application system to overcome the problem of menstruation for Muslim women based on mobile phones. Data collection methods in this study consisted of literature studies, observation, and interviews to determine the needs of the system to be built. The development of the system used the Waterfall method. The scope of development in this research is limited only to the system design stage (Modelling) which is based on the results of the needs analysis of several respondents. The results show that the development of a mobile-based multimedia learning system for Muslim women can provide convenience in providing information for Muslim women studying law and menstruation fiqh according to Islamic teachings. So it can be concluded that this application helps Muslim women to learn menstrual hygiene in an Islamic manner and can be used anywhere and anytime. There are many features such as explanation of the material to menstruation, nifas, Istihadhah, and others. This App will serve as a guide for Muslim women to understand menstruation concerns.

Keywords: *Learning Application, Muslim Women, Mobile Application.*



INTRODUCTION

In the Quran, 2:222 reads, "They ask you about menstrual. Say, "It is an impurity, so keep away from women during it and do not approach them until they are cleansed; when they are cleansed, you may approach them as God has ordained..." [1]. In Islam, menstrual women aren't supposed to touch the Quran, enter the mosque, offer the ritual prayer or have intercourse with their husband for seven full days. The woman is exempted from rituals such as daily prayers and fasting, although she is not given the option of performing these rituals, even if she wants it [2]. Menstrual cycles are often irregular during adolescence, particularly the interval from the first cycle to the second cycle. Most women bleed for 2-7 days during their first menses [3]. Normal menstrual cycles in adolescent menarche (median age): 12 years, mean cycle interval: 32 days in first gynecologic year, menstrual cycle interval: typically 21-45 days, menstrual flow length: 7 days or less, menstrual product use: Three to six pads or tampons per day [4,5]. People in general still think that the issue of purity is taboo, among other things the problem of menstruation and the problems related to uncleanness [6]. Menstrual is a common problem experienced by women and always recurs, but it still leaves a question for some people, especially for Muslim women, because menstrual is related to many religious provisions such as worship and *munakah*, so it needs an in-depth study of menstrual issues [7]. Menstrual and its issues are purification activities for Muslim women, especially before carrying out prayer services. Menstrual, *nifas*, and *istihadhah* are a necessity for a woman's life. This discussion is one of the most difficult discussions in the matter of *fiqh*, even though the discussion is repeatedly conveyed by many Muslim women who do not understand the three types of blood [8].

Technology now has a huge influence on people's lives, which makes people more dependent on it. The mobile phone is one such device that has created a revolution in the world. In addition, the mobile-based system has put its strong feet in the industry throughout these years by arming itself with additional features like music or video downloads, video conferencing, multimedia learning, et cetera, thus becoming the cheapest means of communication and entertainment in the Millennial era [9]. Development of multimedia learning applications for menstrual and its issues

for Muslim women on mobile-based using Eclipse Juno v4.2.3 as an IDE used in coding Android applications, and XAMPP v1.7.9 as a bundle for a web server (Apache) and database (MySQL), the 1.7.0_40 JDK installation package (Java Development kit) for windows, ADT (Android Developer Tools) v22.2, Android-SDK (Software Development Kit) platform android 4.2 API 17 rev_1 for Windows OS.

This application is expected to help Muslim women related to menstrual problems and its issues such as *nifas* and *istihadhah* that may occur due to a woman's menstrual cycle. This also can be used by Muslim women, especially those who use mobile services such as Android applications, where because of their business, it makes it difficult for them to take the time to learn more in-depth knowledge related to menstrual.

METHOD

Data Collection Stage

The data collection method used in this research is literature study, observation, and interviews [10,11]. Data collection was carried out for 2 months through interviews with female students of Universitas Komputer Indonesia aged 18 to 23 years. The data collected relates to the understanding of female students regarding the menstrual process, such as definitions, *nifas*, and *istihadhah*, the names of menstruation, the normal time of menstruation, and others. The next stage, after data collection is complete, is the planning and modelling process[17].

Application Engineering Stage

Application Engineering Stage In development applications using the Waterfall model, which includes several processes which are Communication, Planning, Modelling, Construction, and Deployment as shown in Figure 1 [12].

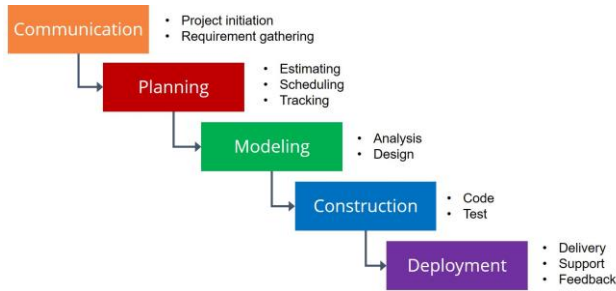


Figure 1. Waterfall Model[16]

Based on Figure 1, All these phases are cascaded to each other in which progress is seen as flowing steadily downwards through the phases. The next phase is started only after the defined set of goals is achieved for the previous phase and is signed off. The following are the phase of waterfall model:

1. The communication phase was carried out as project initiation which intended to make an initial description of the project to be built as the basic foundation of development. After getting the blueprint, collecting the data needed by the system was carried out.
2. The planning phase was to take into account how much time was needed to collect the data until the application was built, besides determining the schedule that is right to conduct research and to whom this research should be carried out. This study was conducted in 2 months, with female students at Universitas Komputer Indonesia as respondents.
3. At the modelling stage, analysis of the data that has been obtained was conducted. Based on the existing data, the initial design of the system will be made.
4. At the construction stage, the existing design will be translated into the system language, namely coding. After the coding process is complete, a test was conducted to see if there are any bugs in the application.
5. At the deployment stage, testing was conducted directly in the field to see if it is suitable or not for user requirements and the user may give feedback so the application can run as the user desired.

RESULTS AND DISCUSSION

This problem analysis aims to describe an existing problem before the application is built and aims to help the application development process.

The analysis of existing problems includes the following: Muslim women who are new to *baligh* generally do not know about the laws of menstrual in Islam, they tend to find it difficult to know the laws of menstrual in Islam, most Muslim women are ashamed to ask other people. Application development to make it easier for Muslim women to learn Menstrual with Islam manner. Furthermore, Menstrual Multimedia Learning Applications minimise taboos and misconceptions on this topic [13]. The materials used for studying menstrual and its issues are shown in Table 1. Table 1 shows that this application can be one of the solutions in menstruation education by creating awareness. None of the misconceptions problems would exist if people were well educated on this subject. It is inline with the previous research conducted by Manjur, S. B (2021) [13].

The materials used for studying menstrual and its issues are shown in Table 1.

Table 1. The material in the menstrual application.

	Materials	Material Details
1	Haid	1. Definition of Haid 2. Obligation to learn about Haidl 3. Fundamental of Haidl 4. Names of Haidl 5. Animals which get haidl 6. Start of haid 7. haidl and clean duration
2	Nifas	1. Definition Nifas 2. Nifas duration
3	Istihadhah	1. Istihadhah definition 2. Kinds of blood 3. Women who istihadhah haid 4. Mustahadhah nifas 5. How to shalat for istihadhah person
4	Things that are forbidden for Muslim women to do during menstruation or nifas	
5	The start and cessation of menstruation or nifas, as well as prayers that must be Qadha	
6	Puberty symptoms	
7	Mandatory bathing	1. Things which obligate Ghusl 2. Requirements of Ghusl 3. Fardu of Ghusl

Based on interviews with several Muslim women who experience normal menstruation in the use of this menstrual application, it can also be described in the form of a use case diagram as shown in Figure 2.

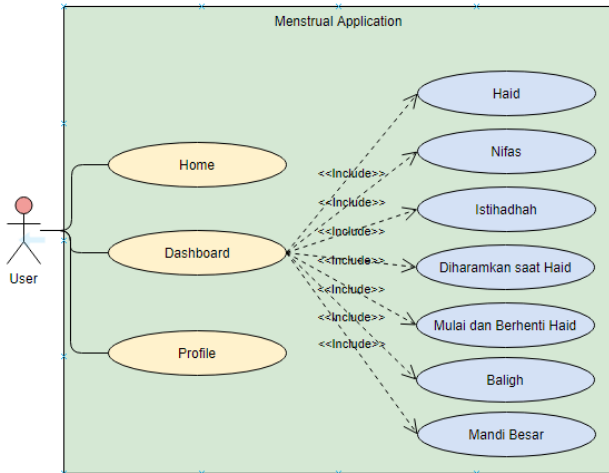


Figure 2. The functionality of Menstrual Application

Interface implementation is done with each page created on an Android tool. The Home interface is the initial display when logging in the application[15]. The Home display implementation is shown in Figure 3.



Figure 3. Home Display

After the Home display, there is a Dashboard display that can be seen in Figure 4.



Figure 4. Dashboard Display

Haid page interface is a whole page view of *Haid* learning. The application display can be described as shown in Figure 5.



Figure 5. *Haid* Material Display

Nifas page interface is a whole page view of *Nifas* learning in the application. Its display is shown in Figure 6.



Figure 6. *Nifas* Material Display

Istihadhah page interface is a whole page view of *Istihadhah* learning in the application display as shown in Figure 7.



Figure 7. *Istihadhah* Material Display

Yang Diharamkan page interface is a whole page view *Yang Diharamkan* learning in the application display as shown in Figure 8.



Figure 8. *Yang Diharamkan* Material Display

Mulai dan Berhenti page interface is a whole page view *Mulai dan Berhenti* learning in the application display as shown in Figure 9.



Figure 9. *Mulai dan Berhenti* Material Display

Tanda-Tanda Baligh page interface is a whole page view *Tanda-Tanda Baligh* learning in the application display as shown in Figure 10.

Tanda-Tanda Baligh

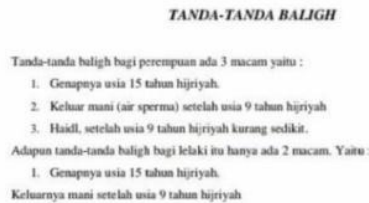


Figure 10. *Tanda-Tanda Baligh* Material Display

Mandi Besar page interface is a whole page view *Mandi Besar* learning in the application display as shown in Figure 11.



Figure 11. *Mandi Besar* Material Display

CONCLUSION

The conclusion of this research is that the built applications can act as an alternative media to help Muslim women to learn the laws of menstrual in Islam, as well easy to use anywhere and also by applying multimedia learning women's menstrual cycle in Islam based on android can provide related understanding Menstrual laws based on women's *fiqh* and *hadith*. Aplikasi menstrual multimedia learning dapat mudah digunakan oleh user karena menyediakan fitur-fitur sesuai kebutuhan wanita muslim. The menstrual multimedia learning application can be easily used by users as it provides features tailored to the needs of Muslim women. There are many features in this application, ranging from an explanation of the material to

menstruation, Nifas, Istihadlah, and others. It is hoped that this material will serve as a guide for Muslim women to understand menstruation concerns. In further research, it is necessary to test this application and similar applications.

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