

## Managing Website Development for Darul Hana Mosque in Sarawak by Implementing ADDIE Approach

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### Abstract

Currently, some mosques in Sarawak utilized Facebook page as main information disseminating platform to users. In efforts to provide an efficient and faster platform for facilitating them, an official and informative website is needed. Therefore, this paper proposed an official website to ensure the community gets information about the activities in Darul Hana mosque of Kuching, Sarawak. In order to develop the website, ADDIE methodology has been utilized which consists of five-step phases: analysis, design, development, implementation, and evaluation. The procedure of collecting the data was initiated by interviewing the management and the community of the Darul Hana mosque. The tools used to develop the website were Wixx.com, Adobe Photoshop CS6, and Adobe Illustrator CS6. As a result, Masjid Darul Hana website was successfully accessible to users. Based on the end-users' feedback, 98% of them were not facing any problems using the website. Besides, experts suggested additional information on monthly donations, and automated system for reservation of available facilities. The significance of this project is to suggest an enhanced interaction medium rather than Facebook to distribute information to the community. This is necessary in managing the mosque's facilities, program and its services to the public, more interactive and accessible in line with fourth industrial revolution era. This project can facilitate the dissemination of the mosque information and its activities, for its target users from various ages, who live in its neighbouring community, to optimize the use of service provided at the Mosque.

*Keywords:* Islamic social development, information sharing, mosque management, website development.

## 1.0 INTRODUCTION

A mosque or *masjid* (in Arabic) is a place where Muslims prostrate and perform their obligatory prayer. The word masjid in Arabic comes from the verb *sajada* which means to prostrate. In the earliest day of Islam, the roles and functions of the mosque are much wider than it is today. It was not only a place of prayer but also the centre for the Muslim community, where religious instruction, political discussion and schools were indispensable appendages to the mosque. When Prophet Muhammad PBUH and his companions migrated to Madinah, one of the first thing that he did was establishing a mosque with his companions. Once the mosque was established, it became the centre of Muslim activities for every level of community, be it men, women or children. (Suratkon et al., 2017)

The mosque is the main place of worship for Muslims. The mosque is also a place for the Islamic community to execute social activities for community development, learning, recreation, and discussion. The mosque is a very important institution and it is a non-profit organization for Muslims. Accordingly, it requires different management of the Mosque organization to generate funding. In community development, the entrepreneurial programs in the mosque will empower the role of the mosque as a centre of Ummah community by running any activities either religious, economic or education activity. It would benefit the Muslim society as long as it is easy for Muslims to adapt and use it to improve themselves. This can be a medium to attract the Muslims to interact with the mosque and indirectly, strengthen the bonds of the ummah. Moreover, the mosque can also gain some additional income from the donations or other fees.

Therefore, to strengthen the mosque institution, this study considered to propose an easily accessible online service provided by the mosque and create awareness to the community of the activities or events held at the mosque. Besides, it is also to develop an official website to provide information about the mosque and to facilitate the community in utilizing service provided by the mosque management.

## 2.0 LITERATURE REVIEW

### 2.1 Mosque as the Center of Social Activity and Interaction

Prior studies have identified that there are many social activities and interactions which happen at the mosques. Mosques have conventionally been centre for the Muslim community for centuries, since its foundation by Prophet Muhammad PBUH, until Muslim civilization reached its peak of excellence. However, attendance in mosques has recently been observed to be seriously low. It is rare to find any mosque being more than 5% occupied except during Friday congregational prayers and other celebrations in the Islamic calendar (Malik, 2017).

In another research, Siskawati, Ferdawati & Surya (2016) highlighted that an active mosque is the mosque that provides many activities inside as well as outside the mosque. This is because there is a society out there of elderly or sick people, single moms, hungry poor people, orphans, low-income families, full-time housewives, and homeless people. Hence, the mosques must not only focus on middle-class and high-income society but also community as a whole including children and people with disabilities.

In line with the State Planning Standards; which introduced the Universal Design Planning Guidelines, these guidelines can assist the mosque administration in planning and designing the disabled-friendly facilities in an urban environment. This plan was initiated to meet the access of

all individuals including people with disabilities. The planning and provision of conducive and user-friendly facilities is an important element of the mosque's environment with a concept of people with disabilities (Syed Hassan & Mohd Nadzari, 2018).

In this study and related research, the mosque is considered the center of the community and towns formed around this pivotal building. A mosque is a place for the local society to connect, conduct religious activities as well as other activities related to the local community (Norman Shah et al., 2015). Nowadays, especially in Muslim countries, mosques are found on nearly every street or corner, making it convenient for Muslims to attend the five daily prayers (Hillenbrand, 2004).

The most appropriate mosque is a mosque which could provide greater benefit to the ummah such as the neighborhood or community mosque. It is because Muslims frequently go to the mosque during prayer times. They often conduct religious activities and programs at the mosque. These programs strengthen the bonds among them and allow them to gain more knowledge about Islam. Additionally, the social activities and interaction among Muslims at the mosque can benefit the community through a variety of tangible activities such as public lectures (*ceramah*), midnight prayers (*qiyamullayl*), Quranic completion ceremony (*Majlis Khatam Al-Quran*) and more. Mosques as the center of social activity and interaction can encourage the community becoming more knowledgeable and living harmoniously together.

## 2.2 Mosque Management in ICT Era

Based on the previous study, the best way to distribute information in this ICT era is by developing a website or mobile application to help the community know the details about the mosque. Nowadays, there is also a social media platform to distribute information such as Whatsapp, Facebook, Instagram, Twitter and so forth.

The usage of e-mosque in Malaysia is still under a moderate level while the rate of internet users is quite high at 16.9 million in 2010. In efforts to increase the rate of penetrating the e-mosque, it should be developed according to the requirements of consumers and also considering the needs of the mosque's authority (Manan, Huda & Ashaari, 2014). According to the related research, (Nabilah et al., 2014) mentioned in her publication entitled "Masjid As-Solihin Kampung Teras Jernang, Bandar Baru Bangi: Administration System Congregational of Mosque based on Web Server" about the kariah members of this mosque, the research found that this system helps the community of the mosque to easily and effectively fill in personal data and information. The system facilitated the mosque by making the data entering and updating process of their kariah data more systematic and organized.

Nowadays, some people use mosques only for Ibadah whereas a developed Islamic city fully utilizing the mosque network could create a better relationship with the people around the mosque. Personal interaction between society and the mosque committee can bring a positive impact and satisfy the customers (Nasution et al., 2015). The purpose of the website is to strengthen the Islamic community by connecting them virtually. It provides a schedule for events such as Islamic talk, wedding, *aqiqah*, *qurban*, and many more (Sahir, 2014).

Norwawi, Shuhud & Syed Hassan (2010) suggested the Zawiyatul Siber, an Islamic cybercafe, to attract youth and teenagers to come to mosque. This cybercafe is equipped by using Linux, an open source operating system to control its activities as well as remind prayer's times. In addition, it serves as a platform for educating teens and as an alternative to cyber cafes in creating a positive environment for their education especially in the use of ICT.

Besides that, the study of Dahlan and his colleagues (Dahlan et.al, 2015) indicated that the role of mosque needs to be revised based on Islam as a comprehensive religion that comprises all life segments including the economy or *muamalat*. e-Halal One Stop Centre (e-HOSC) is being proposed to help the Muslim entrepreneurs, especially to those who are still searching for the best platform to market their products with zero cost, and at the same time helping the consumers to find halal products by Muslim producers.

According to Rahmad Eko Prayogo (Prayogo, 2018), a website with a barcode scanner would help contribute to improve the information system services in the Library of Masjid Gedhe Kauman. The making of the Library of Masjid Gedhe Kauman application is expected to facilitate the work of the library management so that the efficiency and effectiveness of the performance in the library can be further improved. This could accelerate the service of administrators in entering and demolishing visitors' guest books.

Besides, to utilize the full potential of the Network-of-Mosques (NoM) in helping the poor families gain easy and effective access to government, poverty eradication programs such as e-Kasih or the database system, which contains the information of the poor families in Malaysia, will be expedient (Hamid, et al., 2013). Thus, the role of mosque has always been influential in the societal, economic and political uplift of the Muslim community. It is, therefore, incumbent that the Muslim Ummah should endeavour to reinvigorate and revive the roles of the mosques in every ramification of life (Ismail, 2012).

This will enable the Muslim Ummah to lead the way, enlighten the future, and make the world a better place for all mankind by realizing the meaning of Mercy to the world (*rahmatan li al-'alamin*); if the roles of mosques are reinvigorated and reformed. Claudia Paramita (2016) also mentioned in her research that the website system will provide convenient access to the society in getting information and subscribing to the activities of each followed-mosque, as well as provide convenience to the Ministry of Religious Affair in Surakarta, to monitor the mosques effectively and efficiently (Paramita, 2016).

Based on another research, there is an application to facilitate the introduction of the Great Mosque of Central Java. This application was created using Unity3D and Sketchup software, where the programming language used was UnityScript and JavaScript. The design phase was made using Multimedia Development Life Cycle, and then using Flowchart. The implementation phase was done by implementing a 3D model and program implementation. The testing phase as well as testing of the frame rate per second, memory and processor usage, rendering process time, and user testing, was done with a black-box method. The results show that this application runs well on Windows operating systems (Faiztyan, Isnanto & Widiyanto, 2015).

In the contemporary era, using ICT in teaching and learning is seen as capable of enhancing understanding, creativity, mastery, motivation, and creating a fun learning environment. Accordingly, using ICT for mosque programs' and activities' updates are considered necessary (Kamsaton, Mohd Izham & Mohd Kamil, 2010). This is seen as an important step in strengthening the role of mosques and the development of contemporary Islamic society in Malaysia. The use of ICT in Teaching at the Mosque is certainly appealing to the Muslim community today especially in attracting youths to attend the religious classes. In this regard, the formation of the Information Technology Center (ICT) in the mosque is seen as a paradigm shift in the field of preaching especially in strengthening the mosque's role.

In this case, the mosque institution needs to move forward with the community. The society is already at a high level of development, so it is unfortunate that mosque institutions, which should

have been at the heart of Islamic development, are still at a standstill. Therefore, every mosque should be equipped with several ICT facilities to facilitate the administration of the mosque and the congregation to quickly obtain information such as e-fatwa, e-sermon and so on. Websites and social sites for a mosque can also be created and activated; appropriate to today's situation, to facilitate the dissemination of information. At the same time, it is interesting to the Y generation who are completely inseparable from such pages. Thus, this channel can be used as one of the missionary fields in this millennium (Abd. Wahab & Ab. Hamid, 2016).

The same study was done by the Center for Islamic Studies and Development of the Semitum Baiturrahman Semarang; and supported by 2 major institutions in the management of the mosque of Jerusalem Semarang, the Takmir and LAZIZBA institutions. These two institutions have different roles. The Takmir institution in general is responsible for the religious activities carried out in the Baiturrahman mosque, while LAZIZBA oversees collecting and distributing zakat and donation funds. Information on activities carried out in the mosque is sought to be fully communicated to the public, so the community is aware of this information, especially in terms of zakat and donation fund. The value of the zakat collection obtained throughout the province of Semarang shows only a small 10% amount of funds collected. Some of the reasons were poor information about zakat collection, limited distribution areas and a lack of awareness about zakat within the community.

Therefore, with the use of applications in mobile devices, efforts will be made to broaden the scope of the information dissemination on activities at the mosque to the public. A mobile application for communicating information and activities of the Baiturrahman mosque and *zakat* has been developed and made easy for people to access it anywhere and anytime. The application even comes with four categories of users: super admin, system admin, *muzakki* (zakat payers), and *mustahiq* (zakat beneficiaries). This application can be integrated with existing systems (Sasongko, Wibawa & Saputra, 2014).

Another related research by Ashaari (2010), explained that the Salafi group has dominated Islamic cyber-info in Malaysia. The group's evolution of ideas is developed through 3 forms: websites, mailing list, and interactive forum. The role of the Salafi articulation is to leverage cyberspace by embracing ideas, explaining aspects of Islamic jurisprudence, disseminating activities, opening discussion rooms and disseminating audio and video studies. Consequently, Ashaari (2011) provided the starting point for researchers to delve deeper into e-mosques. For example, include a Malaysian capital who has not yet applied for an e-mosque. Among others, the e-mosque administration is classified into three types: governance, government and private. This virtual e-mosque does not have a fixed center but it evolves with the help and support of users. The e-mosque is also a medium of communicating da'wah, which serves to introduce the organization and activities of the mosque, both of which function for preaching (Manan, Huda & Ashaari, 2014).

In ICT Era, the community need something to strengthen their bonds and maintain strong unity. Nowadays, Muslims are attracted to go to the mosque based on interactive mobile applications such as virtual mosque which provide similar services as a physical mosque. For instance, an informative website or a mobile application that can assist Muslims to find their way to the Mosque. This technology can also facilitate the community to know every detail of the program that will be held at the mosque and acknowledge services provided by the mosque.

### 3.0 METHODOLOGY



Darul Hana Mosque, situated in Kuching of Sarawak, was built and opened to public on April 2016. It has been actively providing services to surrounding communities since then. During a preliminary observation, researchers discovered that Facebook page has been as a primary medium for this mosque to spread any information regarding its activities. Therefore, researchers proposed to its management to develop a website to assist them with its required features within 6 months starting from July 2019 until January 2020. Researchers have adopted the ADDIE approach to accomplish the task successfully.

### 3.1 ADDIE Model

The ADDIE methodology is utilized throughout the development of this project. The ADDIE model (refer to Figure 1) consists of five-step phases and included many sub-stages within each of five main phases. Due to the hierarchical structure of the steps, one had to complete the process by completing one phase before starting the next.

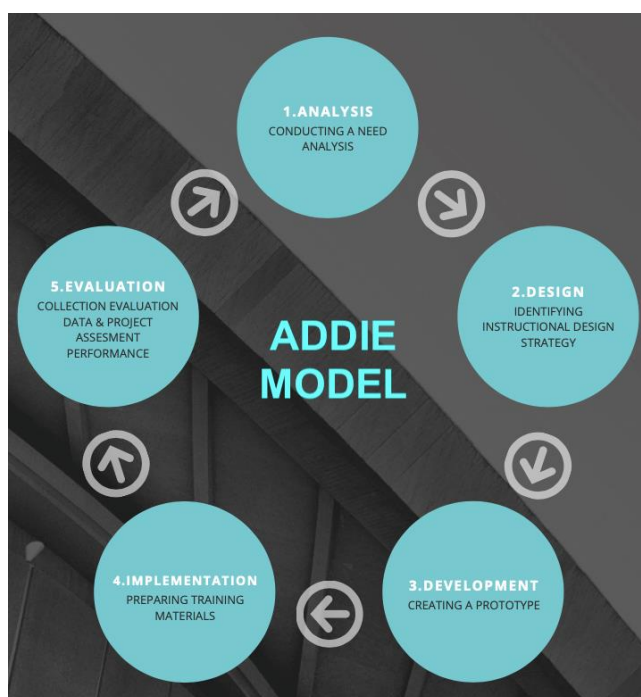


Figure 1 ADDIE Model

#### a) Analysis

The methods of Darul Hana Mosque in disseminating their activities has been analyzed. It is found that Darul Hana Mosque only has Facebook Page as their platform to share information regarding their activities. Indeed, Facebook is a good platform to disseminate information, however it is still lacking officiality and needs to be improved. Website offers a permanence that a social media platform cannot guarantee (Christian, 2018). Hence, the researchers approached the mosque's management and proposed the idea of developing an official website. The proposed website is aimed to facilitate the mosque management in disseminating and spreading information related to their programs and services via one integrated platform.

#### b) Design

Throughout the research, the Darul Hana Mosque management was suggested to use Wixx.com as a template of designing the interface of the website. Wixx.com is an online website

builder that assists the development of websites, without any coding. Wixx.com is recommended since it is a highly intuitive, easy-to-use editor, great value for money, has help features, and rated the highest in public recommendation (Carmichael, 2019) that will help to spread the existence of Darul Hana Mosque internationally. Cooperation with the Darul Hana mosque management was also established in discussing suitable features of the website.

c) Development

The development of the Darul Hana Mosque was done using Wixx.com because the feature would benefit users. The development took approximately 2 months to be completed under the supervision and agreement of the Darul Hana Mosque management on some features that may be added onto the website.

d) Implementation

The implementation test in developing Darul Hana Mosque was to make sure maximum efficiency and positive results were obtained. Portal of Darul Hana Mosque will be launched to see how the users use it. The lack in the mosque portal detected by the researchers and mosque management would be repaired to improve its efficiency.

e) Evaluation

At this stage, Darul Hana Mosque is being subjected to meticulous final testing regarding the what, how, why, and when of the entire project, that were accomplished (or not accomplished). The main goal of the evaluation stage is to determine if the researchers' goals regarding the website have been met and to establish requirements for further efficiency and success.

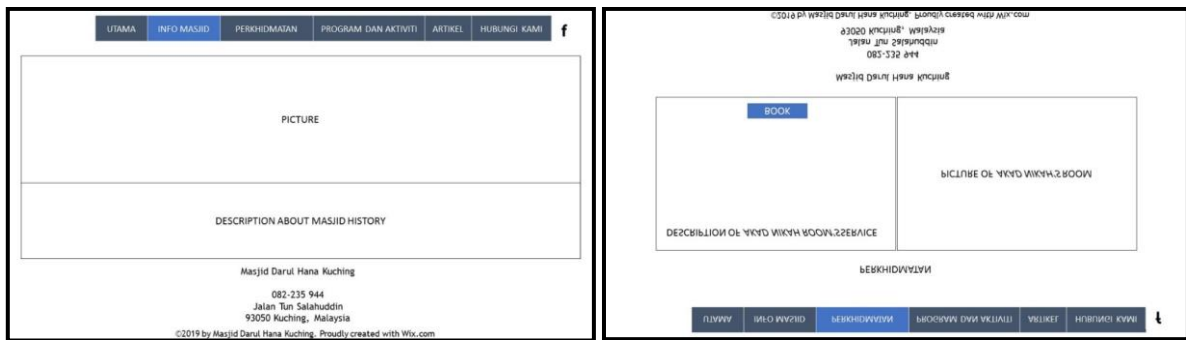
### **3.2 Data Collection Method**

Qualitative research design involving interview was being implemented together with the ADDIE model approaches. The procedure of collecting data was by interviewing the mosque management and the community of Darul Hana Mosque Kuching, Sarawak. Researchers plays important role in collecting the data via a structured interview. The website development then, involved the usage of Wixx.com, Adobe Photoshop CS6, and Adobe Illustrator CS6.

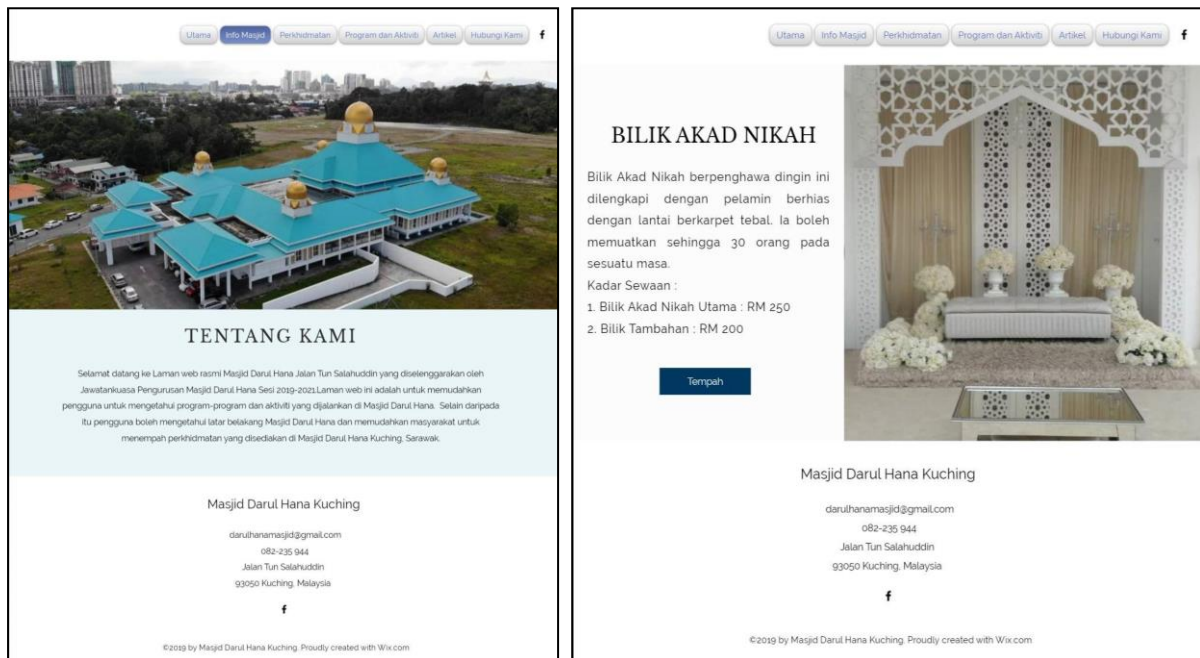
## **4.0 ANALYSIS AND DISCUSSION**

Mosques in Malaysia need to be upgraded along with the growth of the contemporary Muslim community. In the context of tourism, mosques are one of the most important destinations for travellers. The mosque is an easy-to-find building in many locations around the country (Ahmad Fauzi & Muhammad Joseph, 2016). At the analysis phase, every single step in developing the Masjid Darul Hana website (<http://bit.ly/DarulHana>) was being analysed and implemented to the administration and management system of Masjid Darul Hana. Issues and challenges were identified through observation and interview sessions. The researchers examined the data using the interview results, records from the management and the feedbacks from the community of Darul Hana Mosque. The type of analysis that the researchers used was descriptive and comparative. The researchers have been observing many mosques around Negeri Sembilan and Pahang on how the mosques conducted its activities and programs especially on their website features. Afterwards, the researchers chose the best software and hardware to make the efficient website.

In the process of designing and development phase, storyboarding was being used where it is able to display the graphic form of illustration or images in sequence for the website interface design purpose. Two designs of storyboarding were proposed and only the best design was chosen for the website (refer to Figure 2). Considering the best interface design is a very important aspect to ensure the website is user-friendly, attractive and interactive. It was important for the Masjid Darul Hana website that all types of electronic devices such as computers, laptops and smartphones can access this website. Figure 3 then, indicated some of the website pages after being published. The language used on this website is Malay as most people that live around Darul Hana mosque converse in Malay as their main medium of communication.



**Figure 2** Storyboard of website  
Source: Seh, H. & Mohamad, K. (2020)



**Figure 3** Some interfaces of Darul Hana Mosque's website  
Source: Seh, H. & Mohamad, K. (2020)

As for the evaluation phase, the researchers analyze the result of 31 respondents of the website users and 3 experts to review and comment on the design layout, navigability, content, and usability of the website. Table 1 indicates the demography of end-users' feedback and Table 2 shows their



point of views on website’s usability based on four attributes: design/layout, navigability, content, and usability/accessibility.

**Table 1** Demography of End-Users’ Feedback

Item	Detail	Frequency (f)	Percentage (%)
Gender (n=31)	Male	8	26
	Female	23	74
Age (n=31)	18-22 Years Old	8	26
	23-27 Years Old	15	48
	28-32 Years Old	4	12
	33-37 Years Old	2	7
	38 Years Old and Above	2	7
Occupation (n=31)	Student	19	62
	Administration Assistant	2	7
	Administrative/Manager	2	7
	Graphic Designer	1	3
	Academic Professional	1	3
	Other	6	18
Academic Qualification (n=31)	SPM	5	16
	Diploma/ STPM / STAM	11	36
	Degree	14	45
	Master	1	3

Source: Seh, H. & Mohamad, K. (2020)

**Table 2** Website’s Usability

Item	Detail	Frequency (f)	Percentage (%)
<b>A. Design/Layout</b>			
Did you like the design of the website? (n=31)	Strongly Disagree	2	7
	Disagree	0	0
	Moderate	4	13
	Agree	14	45
	Strongly Agree	11	35
Did you like the color of the website? (n=31)	Strongly Disagree	2	7
	Disagree	2	7
	Moderate	3	9
	Agree	9	29
	Strongly Agree	15	48
Were you able to differentiate links easily? (n=31)	Strongly Disagree	2	7
	Disagree	0	0
	Moderate	4	13
	Agree	15	48
	Strongly Agree	10	32
Are the images on the website relevant? (n=31)	Strongly Disagree	2	7
	Disagree	1	3
	Moderate	0	0
	Agree	18	58

	Strongly Agree	10	32
<b>B. Navigability</b>			
Were you able to find links easily? (n=31)	Strongly Disagree	0	0
	Disagree	1	3
	Moderate	6	19
	Agree	17	55
	Strongly Agree	7	23
Were you able to navigate to other pages easily? (n=31)	Strongly Disagree	0	0
	Disagree	1	3
	Moderate	2	7
	Agree	7	22
	Strongly Agree	21	68
Did the links take you to the relevant pages? (n=31)	Strongly Disagree	0	0
	Disagree	1	3
	Moderate	2	7
	Agree	19	61
	Strongly Agree	9	29
<b>C. Content</b>			
Did you find the content on the website relevant? (n=31)	Strongly Disagree	0	0
	Disagree	1	3
	Moderate	4	13
	Agree	17	55
	Strongly Agree	9	29
Could you search for the content you were looking for? (n=31)	Strongly Disagree	1	3
	Disagree	0	0
	Moderate	2	7
	Agree	20	64
	Strongly Agree	8	26
The content is easy to understand? (n=31)	Strongly Disagree	1	3
	Disagree	1	3
	Moderate	1	3
	Agree	18	58
	Strongly Agree	10	33
<b>D. Usability/Accessibility</b>			
This website is easy to use (n=31)	Strongly Disagree	1	3
	Disagree	1	3
	Moderate	3	10
	Agree	17	55
	Strongly Agree	9	29
It is easy to navigate within the website (n=31)	Strongly Disagree	1	3
	Disagree	2	7
	Moderate	1	3
	Agree	18	58
	Strongly Agree	9	29
It is easy to get information from the website? (n=31)	Strongly Disagree	1	3
	Disagree	2	7
	Moderate	1	3
	Agree	16	52
	Strongly Agree	11	35
I feel comfortable to book the service provided on the website. (n=31)	Strongly Disagree	1	3
	Disagree	1	3
	Moderate	2	7

	Agree	16	52
	Strongly Agree	11	35

Source: Seh, H. & Mohamad, K. (2020)

Based on Figure 4 below, there are 58% of respondents who like the interface design and the layout. Besides that, 17 respondents or 55% also like the content of the website. There are 42% of respondents who like the navigation menu and the colour used on the Masjid Darul Hana website. Besides that, for end-users of the website, most dislikes were 29% of respondents who dislike the interface design and the layout. Then, 26% of respondents dislike the navigation menu and 13% of respondents dislike the content of the website. However, there is also a respondent who commented “*dekat pengumuman kalau boleh jangan bagi terlalu kosong*” (the announcement section should not too empty). It means that the announcement column on the website should not be too empty and must be informative.

The researchers should add more content to make the announcement board informative and contented. Furthermore, for the enhancement of the website, the researchers also asked respondents on the improvements to be made on the website. Hence, most respondents would like to change the use of the colour of the website with 48% of respondents agreeing to that statement. There are 32% of respondents who would like to change the interface design and layout of the website and 35% of respondents commented on changing the navigation menu on the website. Furthermore, one respondent or 3% of respondent would like to insert a soundtrack onto the website.

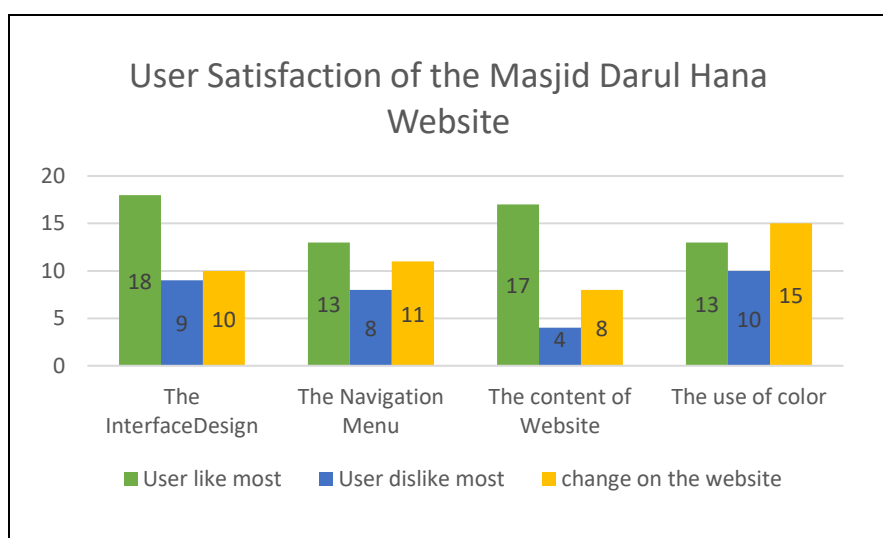


Figure 4 User Satisfaction

In the view of experts, the researchers found that the respondents are contented to use the website as it is easy to navigate and completely informative. Other than that, the respondent’s found it most disagreeable where they found the website lacking information on monthly contribution and facilities booking schedule. The same survey also suggested that the researchers must improve the design of the website to be more readable and understandable. There are many white spaces and the color used was too light. Fortunately, while running the website, all the respondents did not face any challenges because the website was user-friendly. Meanwhile, the respondents also remarked on the website such as add some information on the contribution and on the Masjid Darul Hana management. The respondents would like to see more graphic on each pages, limit the use of white space and improve color used on the website. Finally, the respondents suggested that some information on the management of corpse should be included and to update the monthly fund of Masjid Darul Hana.

In addition, it is also found that many users perceived that the website as user-friendly, information can be disseminated effectively and users can easily look for information and services provided by Masjid Darul Hana. The researchers have successfully launched the Masjid Darul Hana website to be utilized by users. Based on the findings and analysis of website users, the researchers found that 98% of respondents did not have any problems using the website. Based on users' satisfaction analysis, they suggested that the soundtracks should be added onto the website. Experts also recommended that the site should include information on monthly donations received by the mosque and provide a system that can inform users about the availability of services, such as wedding room reservation schedules and training room reservations for users or customers to book online. After analyzing the results of end-users and expert reviews, the website of Masjid Darul Hana could be improved to make users satisfied with the design and favourably use the website.

In this regard, other than providing a website for Masjid Darul Hana, a disabled-friendly mosque with disabled-accessible facilities should be prepared to ease disabled community when they are attending activities or programs at the mosque. In line with the State Planning Standards, which introduced the Universal Design Planning Guidelines, these guidelines can assist the mosque administration in planning and designing the disabled-friendly facilities in an urban environment. This was created to meet the accessibility of all individuals including people with disabilities. The planning and provision of conducive and user-friendly facilities is an important element of the mosque's environment with a concept of people with disabilities as concluded by Syed Hassan & Mohd Nadzari (2018). Then, coordinator and the management of the mosque should have skills in managing the mosque institution to ensure the activity and program at the mosque runs smoothly. An insightful leader can guide the mosque members of the mosque towards a more meaningful life and become more righteous men. A leader should have the vision to restore the mosque's institution in line with the social institution that is close to the conscience of the Muslim community. Other than that, if the mosque is child-friendly, activities or programs for the youth and women can be implemented, then surely efforts to optimize the mosque's function can be realized. This is because every section of society plays an important role in leading the mosque (Abd. Wahab & Ab. Hamid, 2016).

After analyzing the results of end-users and expert reviews, the website of Masjid Darul Hana can be improved to make users satisfied with the interactive design and the usability of the website. The issue and challenges for the mosque can be divided into four parts; governance and administration, economic development, infrastructure, and prosperity. These four elements serve as the main pillars in producing the best mosque management. Also, there are few constraints and challenges faced by the local communities as concluded by Ismail (2012). Based on this research, every mosque must have their own digital application system to facilitate the community and ease them to use the mosque's facilities. The use of the service system inside the mosque should be maximized.

Additionally, Masjid Darul Hana mosque should have facilities to assist the disabled in terms of facilities such as ablution's place (*wudhu*) as well as a resting place for travellers. These facilities are not only to ease them but to attract more people with disabilities to join activities and programs held at the mosque. The planning and provision of conducive and user-friendly facilities is an important element of the mosque's environment with a concept of people with disabilities. Then, the coordinators of the mosque organization and the management of the mosque need to have skills in managing the mosque institution systematically to ensure the activities and program at the mosque to be conducted smoothly. An insightful leader can guide the mosque members of the mosque towards a more meaningful life, which is to become a more righteous man. A leader should

have the vision to restore the mosque's institution in line with the social institution that is close to the conscience of the Muslim community.

As the research has been completed, the researchers found that a mosque that have been operating for many years should have many activities and programs for the community. The mosque provides some services to the community such as the wedding room, seminar or conference rooms, and many more. These details of the program have to be disseminated to the local community to inform and attract them to join the programs held at the mosque or use the facilities and services provided by the mosque.

Therefore, this research was conducted to improve the application system of the mosque to be a more interactive and user-friendly website. Hence, customers or clients do not have to go to the Darul Hana management office which is quite far from where Masjid Darul Hana is located. It also helps the community of Muslims in Sarawak who plans to organize an event at Masjid Darul Hana to save money on petrol and save time from going there just to fill the form to book the conference room or wedding room. Since the website was launched to public, the whole society can learn about Masjid Darul Hana, and download the necessary documentation for facilities booking, then sent to the Masjid Darul Hana management office to be processed.

Besides that, this project could also facilitate the administrator to disseminate information about the mosque and their activities. The target users for this website are people of various ages and for the mosque's neighbouring community to attend and perform prayer and actively participate in all activities held in the mosque. Then, through this website or project, it will help optimize the usage of services provided by the mosque. Hence, this platform can be a reference for other projects in future.

## **5.0 CONCLUSION**

In conclusion, there is no doubt that all information about the mosque facilities, services, and programs held at the mosque should be disseminated by website, mobile application and social application. This is because, in this cyber era, people nowadays like to use the internet to get information, whereas they can save their time visiting the place just to know the facilities, programs, and activities held at that place. Furthermore, the availability of website suits to the current need of digital technology and very much relevant to the current challenging pandemic era that is occurring around the world nowadays.

Even though there is a system that can allow admins to post details of the activities, there are also some of them who have trouble joining the programs because of a busy lifestyle or other reasons. Therefore, by building a system like e-mosque can spread the information faster and easier. Nowadays, the function of the mosque is only enhanced on its function as a place of worship and hence not optimized to match with the present-day technology. Mosques should not only be utilized for worship but also for activities that can help develop ummah such as knowledge related activities, the contribution of Zakat and others.

To be in line with the era of globalization and enhancement of new technology, the mosque website is one of the ways that can be utilized in order to assist the dissemination of information, especially related to Islamic activities. Indeed, another program and tool can also be added to utilize social networking among community. This is a very important facility that every mosque should have as concluded by Ismail (2012). Another future work that is recommended could be the access of information in providing shelters for visitors. Moreover, it would be a great idea if a Muslim



bookshop, cafeteria, and Halal food-store could be incorporated into the areas around the mosques.

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