

# **HOMEPAGE USABILITY: MULTIPLE CASE STUDIES OF TOP 5 IPTA'S HOMEPAGE IN MALAYSIA**

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## **ABSTRACT**

Generally, all universities have a website that has information about the background of the universities and other sub menus that are related to the universities. The website owners should know their websites' usability level in order to deliver messages effectively. This research has intended to identify the importance of the usability factor in the creation of a website. This research has employed a survey method that has been used to analyse the data to identify the crucial aspects that need to be fulfilled and followed before embarking on a homepage design process. This survey has evaluated the top 5 local universities in Malaysia, which are *Universiti Malaya (UM)*, *UniversitiKebangsaan Malaysia (UKM)* *UniversitiTeknologi Malaysia (UTM)*, *UniversitiSains Malaysia (USM)* and *Universiti Putra Malaysia (UPM)*. The evaluation of the usability factor involved were ease of use, navigation, graphics, layout, text and font size. This research is very important, considering the lack of local academic writings regarding homepage usability that are being produced as a guide in the creation of websites. Interview sessions with local professional webpage designers were carried out to get their views, visions and aspirations in webpage designs for universities. The results have been compared in order to fulfil the research objective. The data collection was acquired verbally as well as visually. The findings can be used as a reference to set certain standards in webpage design and creation, and also to be used for academic benefits.

## **Key Words**

Website, Usability analysis, Navigation, Homepage.

## **INTRODUCTION**

A webpage is an important instrument or platform, and the use for it is becoming more diverse by covering advertising, marketing, promotion and product sales. It has also been used to introduce a new company. Website homepages should grab the attention of the visitors and it is all about the first impression (Jacob Nielsen M. T., 2001). The definition of a webpage can be referred to as a group of World Wide Web pages that usually contain hyperlinks to each other and are made available online by an individual, company, educational institution or government (Webster, 2015). When users decide to surf a webpage, the first thing they would do is to surf the homepage. This is where the importance of the usability factor analysis of a website homepage plays its part. If the usability of a homepage is good, it will open up countless possibilities to the benefit of the owner of the website. Prior to the observations and interviews being carried out, it was found that there has been very little research carried out locally regarding the usability of the main page or the homepage. Therefore, it is important to carry out a comparison study of homepages that refers to local websites that have significance, such as university homepages. Furthermore, it is for the benefit of aspiring future webpage designers.

## LITERATURE REVIEWS

There are many literatures that emphasize the importance of a website Dave Gehrke (1999), in their journal, added that the success of website for any company, especially if it is not a well-known name, is greatly dependent on the appropriate design of its website. That is where an interface designer will play his/her role, to design a website that can attract online users. Many industries have realized the potential of websites and have made full use of its features (Jacob Nielsen M. T., 2001) in their book on homepage usability, which mentioned that the homepage should grab the attention of visitors, and it is all about the first impression. According to Jacob Nielsen M. T. (2001), there are many metaphores for the role of the homepage in the users' experience, such as a magazine's cover, newspaper's front page, building's lobby, book's table of contents and brochures. This refers to the importance of the audience's first impression when they look at the homepage. In the context of the institutional or educational websites, such as websites of local universities, they are now booming. Nowadays, academic websites have become a vital part of academic institutions, and one of their most visible faces (Kate Peterson, 2006). Academic website design continues to evolve as universities are under increasing pressure to create a website that has a professional look and feel. Thus, numerous universities are using templates to merge the look and feel of their websites (Kate Peterson, 2006). It is really important to have a homepage that can represent one well, and this will open up countless possibilities, for instance, foreign and local students that are viewing their websites. The interface designer also needs to be alert to the diversity of a web user. The user interface goes beyond regional boundaries, it may use different styles based on its environment (C.Costa, 2010). In this research, the homepage of local universities in Malaysia have been analysed and compared on web usability to determine which site has good usability and has great potential for the user. Usability is a quality attribute relating to how easy something is to use, and it refers to how quickly people get used to it (Jacob Nielsen, 2000). The ISO defines usability as the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use([www.iso.org](http://www.iso.org)). The three measurable usability attributes defined by ISO 1998 are effectiveness, efficiency satisfaction([www.iso.org](http://www.iso.org)). Effectiveness refer to accuracy and completeness with which users achieve specified goals and efficiency refer to resources expended in relation to the accuracy and completeness with which users achieve goals while satisfaction been explain as free from discomfort, and positive attitudes towards the use of the product([www.iso.org](http://www.iso.org)). Nowadays, the web user has become more demanding than before, and they are less and less tolerant of bad designs(Jacob Nielsen, 2000). This means that a bad web design can give a bad effect to the organization or company. The challenge is to design a homepage that brings the user to all the features without any difficulties. The main question is, "How can a web owner, such as an educational institution get user responses for their homepage in order to improve their usability?". Thus, as important of web usability as recommended above, this research has provided user feedback on the selected homepages and has focused on the homepages' usability of local universities in Malaysia.

## PROBLEM STATEMENTS

Even though there are guidebooks on either webpage creation or its usability aspect, the number of references that touches on local content is still scarce. There is a lack of research which provides detailed information regarding the types of specific usability problems that could be found on universities' websites in general. (Hasan, 2013). This research has attempted to answer these few questions.

- How can one analyse the usability of a homepage?
- How does the structure and design of a homepage influence and attract the users and potential followers?
- Which local university's homepage is the best in terms of usability?

## METHODOLOGY

In order to achieve the aims and objectives of the study, the researcher used social studies method which is the qualitative method. Throughout the research, the methodology that is going to be used is case study. According to Tellis (2007), and Zainab Zainal (2007), a case study is an ideal methodology when a holistic, in-depth investigation is needed. Case study was chosen to assist in data collection according to these two factors which is, the researcher can identify the most suitable strategies to solve the issues at hand and second factor is the researcher can suggest and present the best findings and the most relevant resolutions. There were a few possible techniques to evaluate usability throughout the survey. Analysis of user interaction by checklist was one of the techniques. Users could fill in a detailed checklist about the acceptability of various aspects of usability to highlight a particular type of issue (Nigel Bevan, 1991). The size of the sample, whether 2, 10 or 100 cases, does not transform a multiple case into a macroscopic study but the goal of the study should establish the parameters, and then should be applied to all the research. In this way, even a single case could be considered acceptable provided that it met the established objective (Tellis, 1997). The sampling for this research was 30 respondents, who were selected the students from the art & design faculty, as well as those majoring in multimedia and graphic design. The reliability of the respondents was based on their knowledge of multimedia and web design.

RESEARCH INSTRUMENT	QUESTIONNAIRE		
PARTICIPANT	30 Design Students	30 Design Student	
METHOD	SURVEY	PILOT TESTING	INTERVIEWS
STAGE 1	To obtain data that would support the researcher's suggestion that the good structure of the website will help to attract more visitors.		
STAGE 2		Respondents explored the 5 websites to determine the usability of the web	
STAGE 3		Implementation of the Case study on the 5 selected Universities' homepages.	Designers and web developers were also interviewed to obtain data related to their experiences of designing a website.
FINDING			Analysis & Evaluation

Figure 1: Research Plan

To obtain the result, three general stages of the research process were conducted as suggested by Ian Noble and Russel, Bestly (2011); they were investigation, information gathering and transformation of the design. In the first stage, questionnaires were distributed to 30 design-students to obtain data. In the second stage, the respondents were requested to explore the top 5 universities' homepages to determine the usability of the requested to explore the top 5 universities' homepages to determine the usability of the websites in order to get the usability data on those particular homepages in stage 3, which was the implementation of usability on the 5 selected universities' homepages.

## RESULTS & DISCUSSION

From the survey conducted in the previous chapter, it shows that a few local universities' webpages were practical, and there were also a few webpages that could be improved on certain issues. This can be seen through the feedback and responses from the selected respondents and the personal

evaluation from the researcher. Key findings from the survey have been demonstrated in the tables below:

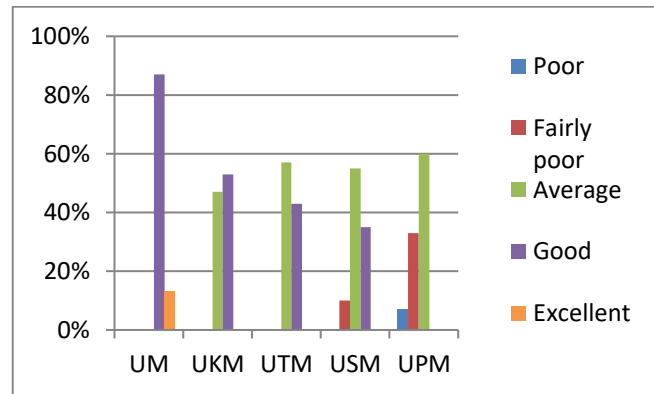


Figure 2: the look/ feel of website?.

Figure 2.0 showed the percentage of the respondents for the question regarding the look and feel of the site. The UM homepage was the only webpage that got the highest percentage for excellent with 13% of respondents agreeing that they felt this way, and 87% found that it was good. Meanwhile, UKM was the second highest with 53% feeling that it was good and 47% mentioning that it was average. If we look at the table, the UTM, USM and UPM webpages had almost 55% to 60% finding that they were average and a few thought they were fairly poor. That means UM had the best look and feel of a website.

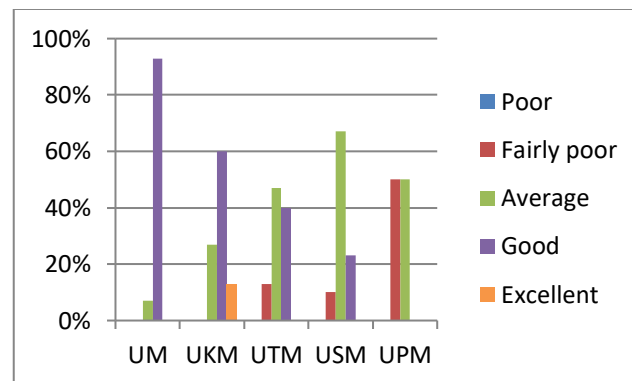


Figure 3:Enjoyment of using the homepage

In Figure 3.0, for UM, 93% of the respondents felt that it was good using the homepage with only 7% mentioning that it was average for the UM site. The UKM site hit the 13% mark of the respondents feeling that they had excellent enjoyment with the website and 60% of the respondents found that it was good. Meanwhile, for UTM and USM, the highest percentage can be found with 47% and 67% of the population finding that it was average, and 40% and 23% thinking that it was good. The UPM site had a 50% vote for both average and fairly poor.

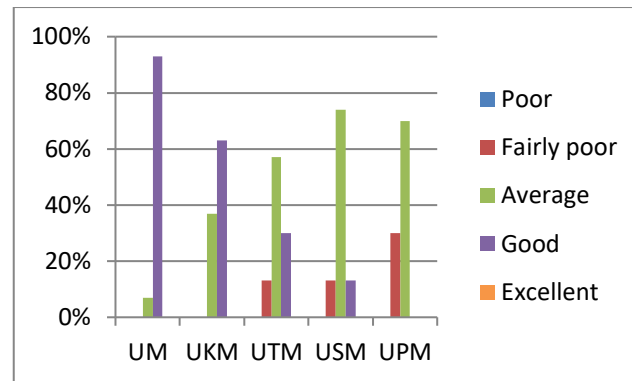


Figure 4.0: The user expectation for the homepage

In Figure 4.0, the user expectation to the site showed that UM hit the highest percentage with 93% of the population feeling that the site was excellent in this area. This was followed by UKM with 63% of the respondents finding that it was good. For the UTM site, 53% found it to be just average and 30% of the population found that it was good. For the USM and UPM sites, 74% and 70% found that it was average while 13% to 30% reflected that it was fairly poor.

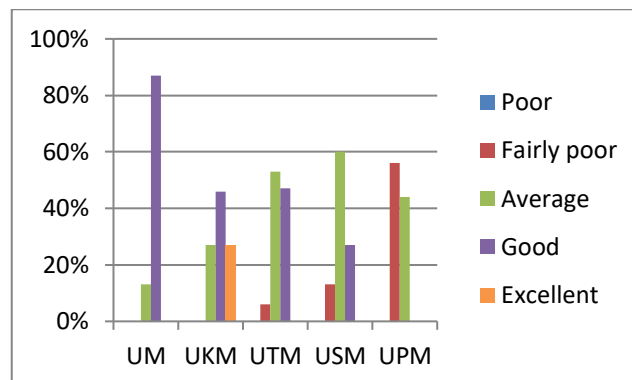


Figure 5.0: The ease of use of website's homepage.

Figure 5.0 explained the respondent's feedback regarding the ease of use for the homepage. 87% of the respondents found that for UM, the ease of use of the site was good, followed by 46% - 47% for UKM and UTM, but UKM also got a higher score with 53% of the respondents remarking that it was average. Meanwhile, USM got a higher percentage of the average with 60% finding that it was average, and 44% - 56% of the respondents found that it was average and fairly poor for the ease of use of the UPM site.

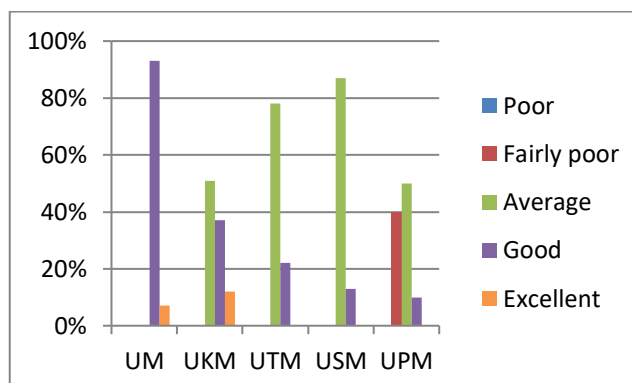


Figure 6.0 : Graphic and layout of website's homepage

Figure 6.0 described the following graphics and layout of the homepage. 93% of the respondents found that the UM graphics and layout was good and 7% found that it was excellent. For the UKM site, 12% found it was excellent with 37% found it was good. Meanwhile, 78% - 87% found that it was average for UTM and USM. The UPM site was voted as 40% and 50% for both fairly poor and average.

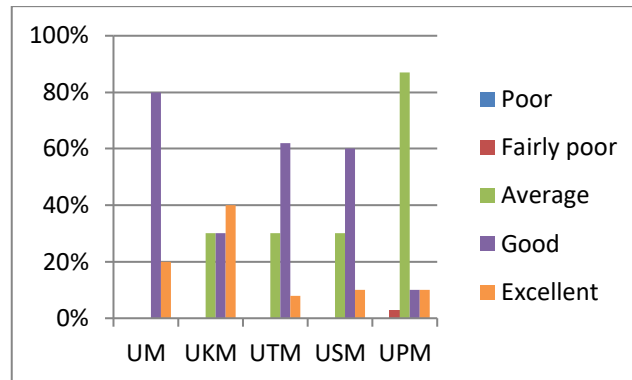


Figure 7.0 :Text/font size of the homepage

As shown in Figure 7.0, most sites got average to excellent for text and font use for the homepage. UM lead the percentage with 80% finding that it was good followed by UKM with 30% - 40% finding that it was good and excellent. Meanwhile, UTM and USM had mostly 60% - 62% finding that it was good, and 87% reflected that it was average for UPM with only 10% thinking it was good.

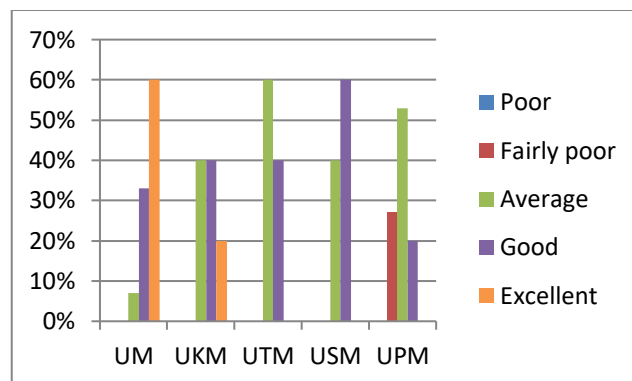


Figure 8.0: The navigation aspect of homepage.

Figure 8.0 refers to the navigation aspect of the website homepage. UM got the highest percentage with 60% of the respondents finding the UM navigation as excellent, and 33% finding it as good. This set UM on top in the navigational aspect followed by UKM with 20% initiating it as excellent, and as 40% for both good and average. 60% of the respondents agreed it was average for UTM and USM, and 40% of the population felt that it was good. Meanwhile, for the UPM site, 20% of the respondents found it was good in the navigational aspect while 53% and 27% found it was average and fairly poor, respectively.

## CONCLUSION

This study analysed usability factor of the website homepage through the look and feel of the web, graphic, layout, text size, ease of use, and navigation aspect will influence and attract web user. If a good usability was applied to the homepage, user will directly and easily guide to achieve the information that needed. This research analysed the usability of the top 5th universities in Malaysia regarding the usability factors using questionnaire. This research also had revealed that the higher ranking universities in Malaysia equally has a good criteria in term of homepage design and homepage usability. As resulted in this study, University Malaya has the best usability, matching their

status as number one universities in Malaysia. University Malaya has invested premium usability layout on their website to attract international audiences from all around the world. This may expanding possibilities for University Malaya toward reaching the best top 100 universities in the World.

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