

Understanding Usability Issues of Pakistani University Websites

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Abstract: Websites are a popular medium for information sharing. University websites are maintained to facilitate students and teachers for information and news update. In order to be effective, websites must be user friendly. Information retrieval should be designed in such a way that users can easily search the required information. Similarly, website layout, structure, navigation and functional modules should be easy to use so that students can easily understand the information and feel comfortable while using the university website. In this paper we present results from a survey, which examined usability of university websites in Pakistan. Questionnaire was designed using Nielsen heuristics of usability and responses were collected from different stakeholders. The results help to understand the usability issues in the websites maintained by universities in Pakistan.

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1. Introduction

Website usage is quickly growing and people have started using web to read newspaper, post advertisements, buy/sell products asf. Web users are quite diverse and in order to be effective, websites should be highly usable. An easy to use website is more effective in implementing successful usage among end users (Krug, 2006). In literature there are many design rules which help in achieving usability in IT applications.

Chen (1999) described that students should be separated in current and prospective students and web interfaces should be designed keeping in view this classification. Similar findings were also found by Bairamzadeh and Bolhari (2010). Carter et al., (2003) have looked at Western Idaho university website to understand the effect of malfunctioning links on university websites. Christoun (2006) and his colleague have researched on the important factor of usability of university web sites and found that 89.4 % of the university students are happy with the web site. Abdul Aziz et al., (2010) surveyed on usability factor of a Malaysian university website and found that still a lot of work needs to be done to portray this site as universally designed. Şengel and Öncü (2010) have analyzed usability aspects of a Turkish university. They found that student gender also affects usability issues. Manzoor and Hussain (2012) have looked at the websites of different Asian universities and found that majority of these websites are partly usable. Despite these contributions there is not enough body of knowledge exploring usability aspects of Pakistani university websites.

Recently, it has been observed that computer usage has increased in Pakistan (cf. Saeed et al., 2008). In our earlier work we have carried out usability

evaluations of Pakistani E-Government/E-Business portals (cf. Saeed et al., 2013) and Pakistani security agencies websites (cf. Saeed et al., 2013a). In this contribution, we want to analyze Pakistani university websites to understand the usability aspects.

Remaining of chapter is structured as follows: Section 2 discusses empirical study followed by a conclusion.

2. Empirical Study

In order to find usability level in Pakistani universities, we identified three university websites. For the sake of anonymity we have coded them as website1, website 2 and website 3. A questionnaire was developed and for each website 12 responses were gathered.

User interface of website is very important aspect for web usability. In our survey we found that for website-1 out of 12 respondents, 4 agreed and 2 disagreed that they were satisfied with its user interface, six respondents were neutral on this issue. In case of website-2, 5 agreed and 2 disagreed that it has a good user interface, 5 respondents remained neutral. Similarly for websites 3, six respondents were satisfied with user interface, while 5 were neutral and 1 dissatisfied user.

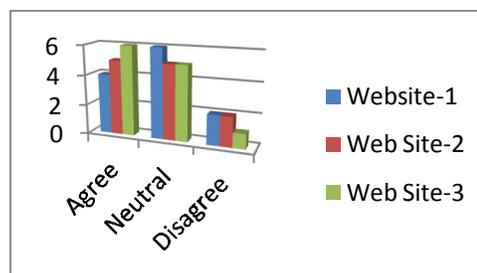


Figure 1: User interface of Websites

The web site is easy to use if one can easily find the required link and navigation to this web site is easy. According to above statistics website-1 out of 12 respondents, 2 agreed and 1 disagreed, 9 are neutral. Website-2 7 of user is agreed, 1 disagreed and 4 are neutral. In case of website-3 five respondents agreed, 1 disagreed and rest of 6 remained neutral about easiness in navigation.

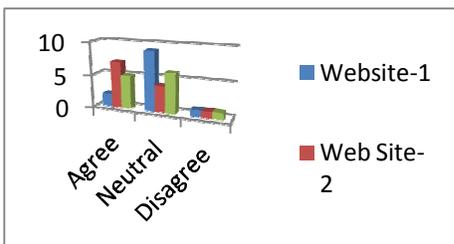


Figure 2: Easy Navigation of Websites

In order to be effective anyone who visits university website should acquire complete information about university procedures and programs. The users should get the required information from the web site very easily. In our survey we found that for website-1 3 users agreed, 8 remained neutral and 1 user disagreed about information completeness. In case of website-2, 5 users agreed, 2 remained neutral and 5 disagreed about the presence of this aspect. In case of website-3, 5 users agreed, 7 remained neutral and no one disagreed that tone can effectively get complete information about university procedures and programs.

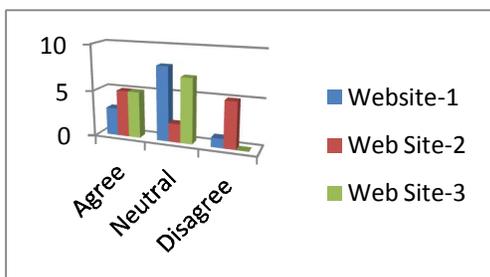


Figure 3: Information Completeness

The website contents should be updated on regular basis so that user can get the updated information on time. In our survey we found that for website-1 out of 12, four agreed, 7 were neutral and one disagreed. For website-2 four users agreed, 3 are neutral and five disagreed, whereas for website-3 three responded agreed, nine are neutral and zero users disagreed, that they were able to get regular information about new announcements and updates from the web site.

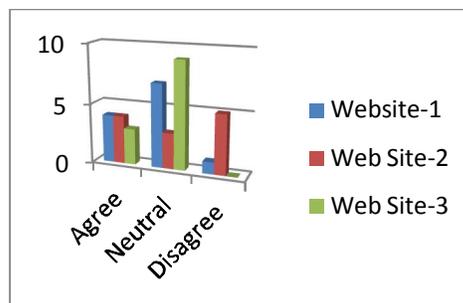


Figure 4: Information Update on Websites

Learnability of user interface elements is another important characteristic for usability, especially for non-frequent users. In our survey we found that in case of website-1 out of 12 responses zero agreed, ten responses are neutral and two disagreed that it was easy to learn the website usage. In case of website-2 seven users agreed, 4 remained neutral and one disagreed, whereas for website-3 five users agreed, six remained neutral and 1 disagreed that it was easy to learn to use this website, as shown in figure 5.

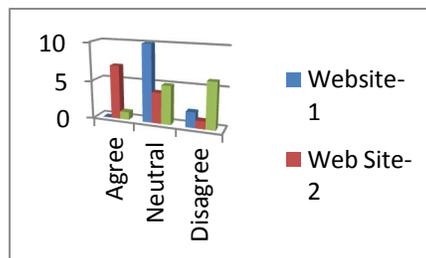


Figure 5: Easy to learn interface of Websites

Another important feature of highly usable system is provision of meaningful messages in case of error situations. In our survey we found that for website-1 one user agreed, 7 users were neutral and four users disagreed that this website provided meaningful error messages. In case of website-2 two users agreed, 3 remained neutral and seven disagreed whereas for website-3 five agreed, 6 remained neutral and one disagreed that website gave meaningful error messages, as shown in figure 6.

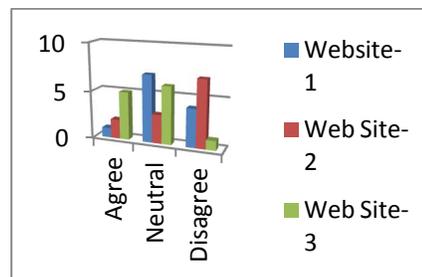


Figure 6: Meaningful Error Messages

Another factor contributing to usability of software systems is the ease of finding required information. In case of website-1 two users agreed, one disagreed and nine remained neutral on this issue. In case of website-2 five agreed, three remained neutral and no one disagreed, as shown in figure 7.

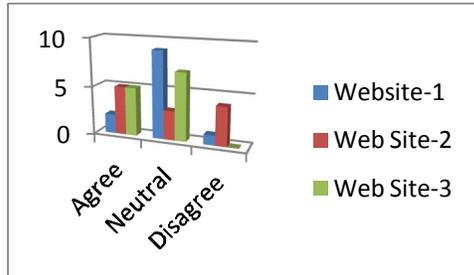


Figure 7: Easiness in Locating Information

The interface design and color scheme is important for look and feel of any system. In our survey we found that for website-1 two users agreed, 10 were neutral and no one disagreed. In case of website-2 five users agreed, 2 were neutral and 5 disagreed. In case of website-3 five users agreed, 7 were neutral and no one disagreed that the interface of this web site was not pleasant.

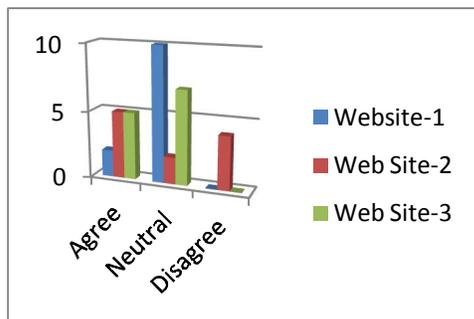


Figure 8: Pleasant Interface Design

An effective website should be regularly updated. In our survey we found that for website-1 five users agreed, 4 remained neutral and 3 users disagreed that the content on this website is updated. In case of website-2 four users agreed, 4 disagreed and 4 remained neutral. In case of website-3, 5 users agreed, 6 remained neutral and one disagreed that the website content has been regularly updated, as shown in figure 9.

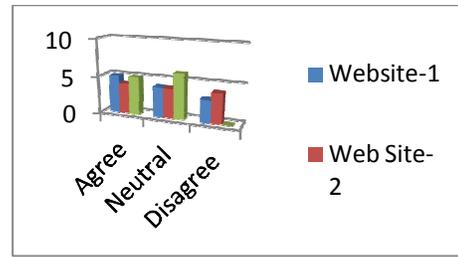


Figure 9: Regular Website Updating

User should be able to easily navigate through the website content. Furthermore, important content should have links on the home page. In our survey we found that for website-1, 2 users agreed, 10 remained neutral and no one disagreed. In case of website-2 three users agreed, 5 remained neutral and 4 disagreed whereas, in case of website-3 six users agreed, 5 were neutral and 1 user disagreed that one can find the navigation links when exploring the website.

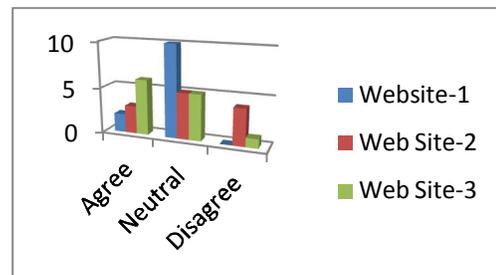


Figure 10: Navigation Structure in Website Content

In case of university websites it is also important that this space is used for data sharing in the form of lecture slides and other reading material. In our survey we found that in case of website 1, no user agreed to this, 5 remained neutral and 7 users disagreed. In case of website-2, 4 users agreed, 1 remained neutral and 7 disagreed whereas in case of website-3, 2 users agreed, 9 remained neutral and 1 disagreed that they can get teachers lecture and relevant material through web site, as shown in figure 11.

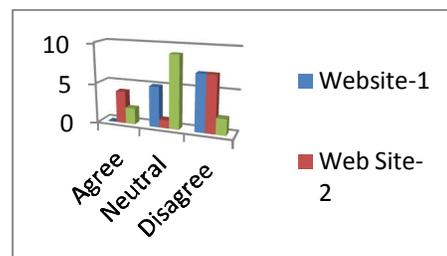


Figure 11: Provision of Lecture Contents through Websites

Some universities provide complete student information such as registered course, attendance record, and examination record asf. on their websites. In our survey we found that in case of website-1, 2 users agreed, 7 remained neutral and 3 users disagreed. On the other hand for website-2, 10 users agreed, 1 remained neutral and 1 user disagreed. In case of Website-3, 5 users agreed, 2 remained neutral and 2 users disagreed that they can access such information through university website, as shown in figure 12.

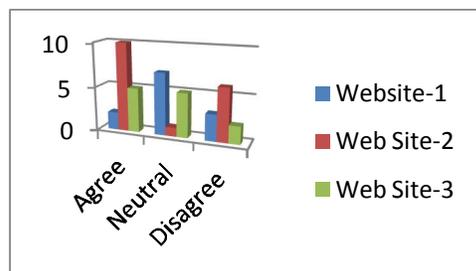


Figure 12: Provision of Student Information through Websites

3. Conclusion

The analysis shows variations in usability levels and majority of websites having usability problems. Websites are not updated regularly and it is mainly difficult to find last update time. This survey evaluated the usability of three university websites having sample data size of twelve students/teachers. We have evaluated these websites in detail especially focusing on available content, user interface design, navigation structures and look and feel. The result shows that the web sites are fairly developed but still there is need to improve the design of website to increase usability. In order to increase the usability of website, they have to be designed according to usability guidelines. This survey will help policy makers and practitioners to improve the university websites.

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