Level of Customer Satisfaction and Usability Issues in Online Banking Websites

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***Abstract*-** The internet has affected business in many ways. As a result banks have been under pressure to implement more advanced electronic delivery channels and payment methods. Most banks are now offering online services known as online banking or internet banking to their customers in order to remain in a competitive edge as well as to remain in business. In order to improve this facility it is needed to better understand customer attitude and the level of satisfaction and acceptance of this technology. The study considers web usability as a dominant factor effecting customer satisfaction of online banking. In several web usability researches done the usability issues of web sites in general were talked. The few specific web usability researches are focused mainly on Electronic commerce web sites. There is only limited literature available related to financial websites such as online banking websites. Bearing in mind that usability is still a major weakness in many websites and the importance of bank websites it would be valuable to extend the knowledge about usability in this sector.

***Index Terms*-** Computer Science, Computer Interfaces, Human Computer Interaction, Internet

I. INTRODUCTION

Today most of the people use commercial websites to get done many of their day to day activities. Users most enjoy websites that provide clear information, easy navigation and an engaging customer experience. If a website is difficult to use, people leave. There's no such thing as a user reading a website manual or otherwise spending much time trying to figure out a Graphical User Interface (GUI) [1], [2]. Since there are plenty of other websites available leaving is the first line of defense when users encounter a difficulty. The first law of e-commerce is that if users cannot find the product, they cannot buy it either [1].

Online banking is a challenging endeavor for financial services companies such as banks since they must provide so much important as well as reliable information as well as services through their websites. However, to remain competitive they must be able to attract more and keep loyal users by enhancing their services convenience with an excellent online experience. Research shows that 50% of prospective customers registering for online banking bail out before signing up, mostly due to problems navigating the site, completing online forms, security fears, and understanding content and feedback [3], [4]. Therefore it could be argued that website usability becomes one of the most vital issues in online banking. Therefore conducting a research for banks with a try to solve this problem is considered essential. The main objectives of the study are;

- Find out usability related problems that require to be addressed when using the websites for online banking.
- Identify GUI features that lead to an enhanced user experience.

II. LITERATURE REVIEW

The major problem with the definition of usability is that it is very difficult to specify the characteristics and it's attributes that should be considered in particular [5], [6]. The nature of the characteristics and required attributes depend on the context in which the product is used. The broadest and most common definition of usability is simplified to ease-of-use. Web usability is about making the website in such a way that the site users can find what they're looking for quickly and efficiently. Research into users' interaction with websites and intranets has continued as the web has evolved through generations of technology. Despite many other definitions on usability, Jakob Nielsen's [5], [6] definition on web usability is widely accepted among usability experts. Jakob Nielsen founded the "discount usability engineering" movement for fast and cheap improvements of user interfaces and has invented several usability methods, including heuristic evaluation. He holds 79 United States patents, mainly on ways of making the Internet easier to use. He was named as "the reigning guru of web usability" by Fortune and as "perhaps the best-known design and usability guru on the Internet" by Financial Times and many more [5]. According to Nielsen's definition usability is a quality attribute that assesses how easy user interfaces are to use [5]. The word usability also refers to methods for improving ease-of-use during the design process. Usability is defined by five quality components by him as [1], [5].

- Learnability: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- Efficiency: Once users have learned the design, how quickly can they perform tasks?
- Memorability: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- Errors: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- Satisfaction: How pleasant is it to use the design?

According to a research done by Bahador Jamshidi [7] factors that shape B2B website usability were identified with a consideration of multiple sides of the usability of B2B websites. In a broader conclusion he claims that the meaning and definition

of usability in B2B environment is related with these four values: A secure and trusted website that saves cost and time and cares for the independency of its customers is called usable while talking in a B2B environment.

The goal of the usability test conducted by Janhavi Sheode [8] was to analyze the two websites against usability. Usability testing helps to find which features of a given design work well for the target audience, which features don't and determine the effectiveness of the design. Empirical technique for usability testing was applied to test the usability of the two websites by which participants were observed while they performed information seeking tasks using the websites and feedback was obtained to identify usability issues. The study indicated that overall both websites are user friendly although some information seeking tasks revealed problems in one website than the other due to lack of well presented information and inefficient website design.

In a research conducted by Michelle Bayles [9] results from a questionnaire designed to query online banking behavior are reported. The most frequent activities reported were checking account balances and viewing or paying bills. Purchasing insurance, CDs, and applying for a loan or credit card were the most infrequent online activities. Respondents indicated that convenience and saving time were the biggest incentives to bank online. Quick access to information, clear feedback, and simple terminology were identified as the most important features of an online banking site.

It is important to notice that these substantial technological advances have not caused radical changes in usability issues. Usability guidelines remain remarkably steady through generations of technology because usability is a matter of human behavior, and people don't change much from one decade to the next. Their characteristics are about the same, as are their behaviors [10]. Based on the principles of Human Computer Interaction (HCI), web usability has become a recognized success factor for all e-business, including online banking.

III. METHOD

The proposed research is an explorative study since although some factors are known more information is needed in identifying usability issues and features for potential improvements for an enhanced online banking experience. For this research the usability is assessed at individual bank level. The research considers data gathered from a group of individuals using the same bank's online facility as data corresponding to that particular bank. So the unit of analysis for the study is at the group level.

Questionnaire Technique and interviewing technique are used to gather information about usability issues, as well as to collect web surfer's interests and desires in online experiences, as well as to gather important feedback. When considering population for the questionnaire there are identifiable subgroups within the population that are expected to have different responses for the variable of interest (usability) to the researcher. The population for the research is online banking users in Sri Lanka and each sub group is the set of online banking users representing a particular bank. To trace the differences in the responses of the different sub groups within the population it is necessary to use Stratified Random sampling method as the sampling method for the research. It is expected when using this sampling method each important segment of the population is better represented, and more valuable and differentiated information can be obtained with respect to each group. A sample of 100 subjects are considered for the survey from recognized IT companies and IT institutes under the assumption that they would be the most probable persons exposed to online activities such as online banking, and could provide representative replies relevant to this research. The subjects selected for each group will be disproportionate to the number of subjects in the group since for some groups it is expected that the number of subjects for some groups will be too small. A well constructed questionnaire is distributed among the selected sample of IT people. The questionnaire is created as an online survey questionnaire and is emailed to among the selected sample. The www.freeOnlineSurveys.com questionnaire tool is used for the purpose. The online survey is expected to increase the number of responses returned. For the interview sample consists of two individuals for each bank considered in the study, who is already using online banking facility of that bank. Judgment sampling method is used since people who possess the needed facts and are able to provide the information sought are required for the purpose.

As the usability measurement technique the web usability definition proposed by Jakob Nielsen is used. According to that the usability characteristics considered for evaluation are learnability, efficiency, memorability, errors and satisfaction [1], [5]. Further for the research the researcher considers two additional characteristics. These additional characteristics which would be essential for a bank website are identified using the secondary sources [11]-[13]. They are the level of perceived security and website content of the website. The questionnaire is designed incorporating well identified questions to measure the 7 characteristics (independent variables). A set of questions targets to address one of the characteristics. The results obtained from these 7 characteristics are used to get a measure on the level of usability (dependent variable). The 7 characteristics considered in the survey are; learnability, efficiency, memorability, errors, level of perceived security, website content, satisfaction.

IV. DISCUSSION

When conducting the research one of the assumptions the researcher made is when selecting IT people as the sample is that IT people are very much exposed to online transactions through internet. When considering the results obtained the number of online banking users is 39% as given in Fig. 1. So according to research results obtained it can be seen that in Sri Lanka online banking users within the IT industry is also very small.

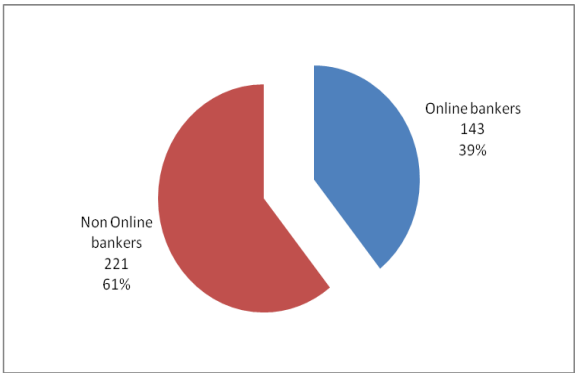

Fig. 1. Total number of valid respondents categorized in to 2 groups as online bankers and as non online bankers

When considering the age 62% are included into the 20 – 29 years age category as summarized in the Fig. 2. It can be assumed that this bias of age factor is introduced because IT related people are considered as the sample and still in Sri Lanka IT related job involvement is very less among older generation.

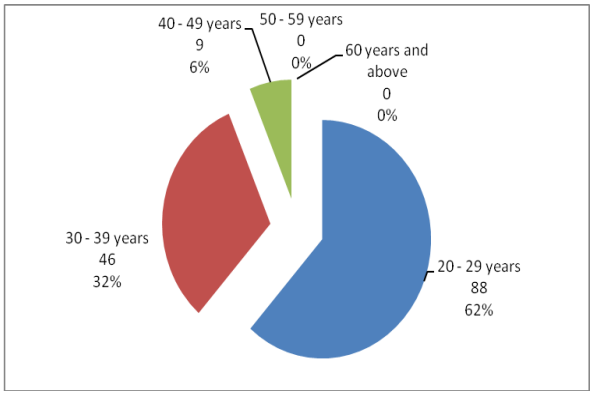

Fig. 2. Number of respondents who use online banking categorized by age

The number of online transactions done by the respondents using any website on internet is also considered in order to get an idea about how comfortable they are with transactions through internet. According to summary results given in Fig. 3 it can be seen that as a percentage 31% have done online transactions on internet at least more than 2 - 3 times. According to research results it can be concluded that people who use online banking are people who already feel comfortable with transactions over the internet.

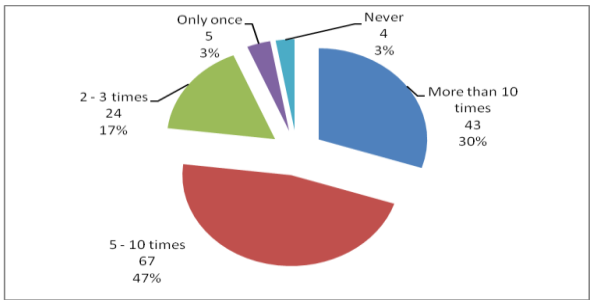

Fig. 3. The number of online transactions done by the respondents using any website on internet

The research tried to capture the factors as to why banking customers specially the ones in IT industry still have not moved towards online banking. As identified 41% as a percentage do not use online banking because of security fears. The summary results are given in Fig. 4. Even though all banks assure their customers of full protection for the online transactions done through their banks [15]-[18] according to research results it can be seen that people still do not feel secure about online transactions. So it is recommended that internet and online transaction security awareness programs are necessary in order to increase the number of online banking users in Sri Lanka.

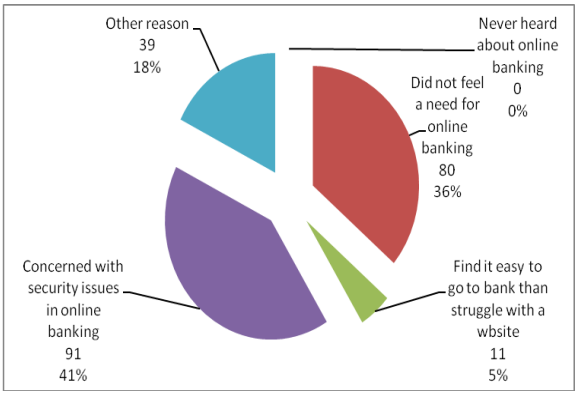

Fig. 4. Reason given by the non online banking respondents as to why they do not use online banking

According to results as given in Fig. 5 there is a considerable amount of users only for Bank A, Bank B, Bank C and Bank D. For Bank H and Bank I the number of users is very few and for other banks considered for the research the sample selected has 0 users. Even though the researcher has tried to capture the issues in most of the bank websites it can be seen for online banking users in Sri Lanka have clustered mainly around 3 banks for online banking.

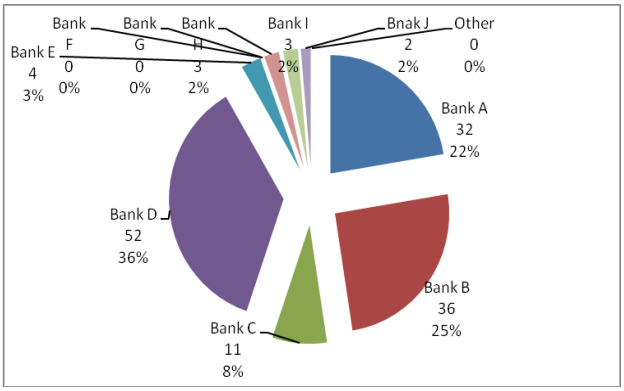

Fig. 5. Number of respondents identified for each bank from among the respondents who use online banking

Through the interview researcher identified the actions needed by the user to complete a particular task using the website and also the difficulties faced. Through the interview the researcher got a better understanding as to why the respondents have responded negatively for the survey questionnaire. The major problems captured in the research are listed as follows.

- Some icons are not viewable in some browsers

- The main menu is not clearly visible and also it does not seem like a menu bar that is clickable.
- Contact information, search facility, site map and information icons are hidden in the website.
- Since the search facility is not provided in the standard way users miss noticing it.
- Even though user can sign out it seems as no proper sign-out mechanism the way it is given.
- When the user go to do a transaction if he is not sure about the account balance he has to go back to the main menu and select the Check balance option to view the current balance, and again have to move back through the menu to perform the transaction.
- Also the user need to memorize the account balance (since it is not provided in the transaction performing page) until he settles all the payments if he plans to do many payments in the payments web page and also the balance deductions the user himself has to calculate.
- All available options are available only in the main page. Once you move in to an option all other available options are hidden.
- No proper way to increase the font size of a web page if needed. If the browsers functionality is used the page always gets upset in IE7.
- When checking the history information has to go inside the webpage of each transaction type and check for history information if needed to confirm about the security.
- Flash animations are widely used. Takes time to load a single page.
- No site map is provided to identify locations within the web page.
- No acknowledgement page is given before committing a transaction.
- Identifying error messages is difficult since they are not easily viewable. If an error occurs it seems like web page is not responding and the user is left confused.
- Information search is difficult. Have to go through the menu to search for different options.
- Wrong input information provided. Ex: To enter the payment date the date format is given as D/M/YY. But still if you enter it that way it is not accepted by the website. The accepted format is DD/MM/YY
- Has problem in remembering the username of the account. Username has no relationship with the account user's information.
- Display of history information in one go is limited.
- Although the home page is very informative most of the information are displayed as text links. So not much viewable as links with images.
- Tab menu available have problems with browser compatibility since in some browsers the tab menu cannot be viewed. Ex: In IE7 it looks like a normal line of text.

When analyzing the above issues it can be identified that some important considerations are ignored when developing the bank websites. The proposed guidelines for bank websites are as follows.

- Always follow website standards and guidelines when developing a website.
- Make the website flexible at least to allow the user to change the username.
- Always make available the information and reports that are necessary for the users. Also make them easily accessible.
- Reduce what the user has to memorize. Provide all necessary information that is needed to perform transactions.
- Display the last 5 transactions that were performed on the account at the time of login along with the last login details. It ensures the feel of security for user.
- Reduce the amount of data the user has to key in, instead always allow the user to select his/ her input data whenever possible.
- Always make the website independent from the browser as much as possible
- Build the website compatible to a browser version that is most popular among the users but it should provide alternatives to the users who are using other browser versions too.
- Always address the needs of all types of users of a website. Include tool tips since it helps the visually disabled.

V. CONCLUSION

All websites of banks considered do not have major deficiencies regarding most of the usability features. So as a final conclusion it can be stated that the current online banking users are satisfied with the level of usability the website offers them. But the minimum, maximum and the variance values indicate that it is not the case for all. There may be different reasons for the variability of the responses. Since the sample consists of IT people the level of IT literacy and language problems cannot be considered as a major factor affecting the result. But still it cannot be ignored the fact that everyone might not have a good knowledge in IT. Rather physical factors such as bad eye sight, physical disabilities such as tremor in hands may have affected the result. But a good website must address the requirements of all types of users. So different problems that are present in the websites that affects the users were identified and guidelines were proposed.

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