

Review on Cyber Security Situational Awareness among Parents

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Abstract - This Project attempts to measure the level of cyber security parental awareness to protect their children, by means of survey reports among parents of students aged 17 and below. A quantitative data analysis was performed using Project software and interpreted based on the distribution of positions. A mixture of general profiling of respondents and descriptive statistics were used during the analysis method. Any findings to this project would mean an increased attention to the suggested Cyber Parenting Model in order to establish the factors that affect Internet safety at home. Early exposure to parental awareness would aid in opening up knowledge about cyber security among parents.

Key Words: Cyber security awareness, cyber security education, cyber security parenting, eSafety.

1. INTRODUCTION

Cyber Security Situational Awareness among Parents is an Online Survey System Project is a web-based application will develop in PHP programming language to facilitate online survey. The main aim of the project is to form a platform to collect the viewpoints of related parents about certain issue using the internet. Along with launching survey, it is capable of giving e-mail or SMS notifications. It can be implemented in any organizations or school for carrying out survey of Cyber Security Awareness.

The proposed online project is an implementation of PHP programming language for software generation that is important in school or organization to carry survey. In this system of survey, only the users authenticated by admin from the database system can drop their review or express their viewpoint regarding the issue. Being online software, it can be logged on from anywhere with internet access.

In Malaysia, national-level cyber safety awareness campaigns have been implemented through governmental agencies, corporate sectors and non-governmental organizations (NGOs) such as Ministry Of Women, Family and Community Development (MWFCD) Malaysian Communications And Multimedia Commission (MCMC), CyberSecurity Malaysia (CSM) and Digi Telecommunication Sdn. Bhd (Digi). This informational medium, as provided by the government, is highly important to raise awareness significantly among the target groups, especially students and parents. Through the Click Wisely program by MCMC in year 2016, more than 800 activities have been performed with an ever-widening audience of 1.7 million. Having little knowledge on what their children are doing online constitutes an indication that the awareness about cyber

security threats is still low among parents. This is rather seen as an apparent disadvantage through the unsympathetic eyes of children who realize that their parents may be technologically challenged. When it comes to screen time, only 4 out of 10 parents know what their children are searching for on the Internet. In many cases, parents are unaware of their children's unwarranted access and exposure to inappropriate online sites, subjecting the children to the threat of cyber security. Despite its importance and wide educational influence among children, the Internet however, allows for the emergence of unhealthy elements marked with obscene content, cyberbullying, addiction, Internet scams, and personal information leakage during the children's voyage through cyberspace. These cyber security threats are said to be increasingly complex and drastically deteriorated from time to time

1.1 Overall Approach

This descriptive study uses quantitative approaches adapted from Creswell's design framework. A survey was used to collect data from respondents consisting of parents throughout Malaysia. The main phases of this study has four breakdowns: the preliminary study, the pilot research for validity and reliability, the actual study/discovery and the conclusion.

1.2 Development of Questionnaire

This study contains 8 basic closed questions about parental awareness on cyber security threats among children. There is a question about the presence of parents in an awareness program organized by a responsible party and the level of satisfaction about the program. Other questions, among others, are about cyber security awareness among the respondents' children, awareness to what the children are doing, exemplary use of cyberspace at home and the difficulty in controlling children's Internet use. Six questions from this same section use the Likert Scale method, where the answer scales are: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. One question in this section requires respondents to answer 1 = Yes or 2 = No, whereas another item requires the respondent to make a choice by marking the list of corresponding answers.

1.3 Target Respondents, Sampling and Distribution

A total of 384 parents make up the simple sampling for an appropriate analysis to take place, and convey the correct level of accuracy and validity for the benefit of the

research (Krejcie & Morgan 1970), representing 5,074,612 parents of schoolgoing children in Malaysia.

1.4 Fieldwork

Prior to fieldwork, a pilot study was conducted to assess the level of respondents, understanding of the questions and validate the questionnaire flow before identifying any potential technical issues pertaining to the SurveyMonkey platform. A total of 47 students participated in the pilot study. Questionnaire forms are manually given to parents through schools, while the online survey distributed through SurveyMonkey.

This study aims to examine the level of parental awareness about cyber security threats to children across Malaysia. From 1426 forms distributed to the respondents, only 872 forms were filled, completed and returned to researchers. The quantitative data collected, were analyzed through two steps using SPSS statistical software and interpreted based on the distribution of data positions. The two steps were general respondent profiling and descriptive statistical analysis

The data, as collected by the survey, are considered limited as they only applied to parents in mainstream schools. This study gave information about some parents and not all of them; excluding parents in private, international or special education schools. Such schools should be included in future studies in order to create a more comprehensive scope rather an open one, towards developing a national module for cyber parenting in Malaysia.

2. EXISTING SYSTEM

In order to take any decision in an organization, it is essential to know what actually students or parents know about cyber security awareness. It may not possible to listen to everybody separately and sometimes the viewpoints are required to be kept secret. Also, the manual system of survey is tedious and time consuming as well as uneconomical. So, an online survey system is the solution of these existing problems.

3. PROPOSED SYSTEM

The proposed Cyber Security Situational Awareness among Parents Online Survey System is easy and comfortable to use. In this software, the answers or viewpoints of the participants are collected using ratio button or check box. The system is designed in such a way that it automatically adds the votes to each alternative and after the deadline of survey it displays the result. All the activities in the project are controlled by approvers like HRS.

The system plays a vital role in minimizing the budget of survey. The implementation of project avoids the programs such as meetings, conferences etc. to take any decision or research. With the help of this online system, one

can easily forward his/her ideas and viewpoints to the officials.

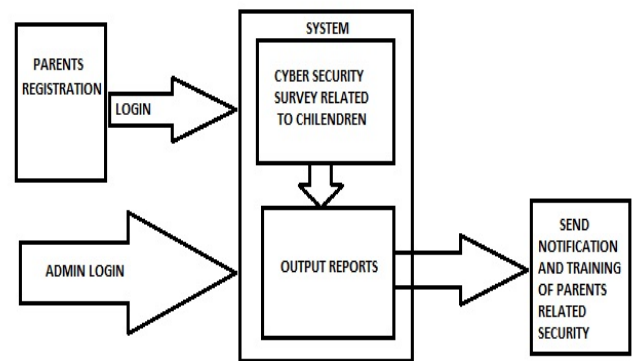


Fig-1: Propose System

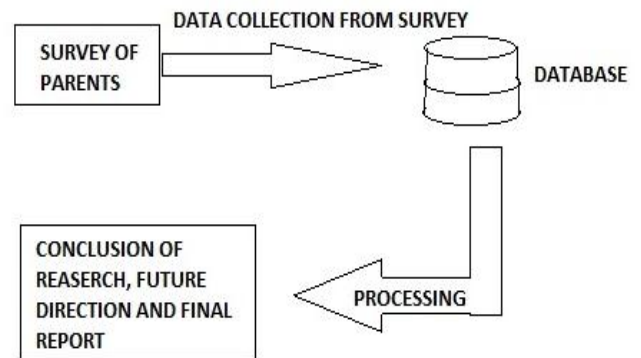


Fig-2: Block Diagram of System

This system will design for parents and school/college organization to understanding knowledge of cyber security situational awareness among parents. This system will have two user first one is login for parents for survey related to cyber security and second user is admin for result of security survey and report generation. This system also has one option for admin to send notification to those parents who does not knowlege about cyber security. Fig 1 is proposed system of Cyber Security Situational Awareness among Parents. In this diagram first phase is registration of all parents who participate in cyber security survey after this step result is stored in database system. After this step admin login in system and can view responses of parents related to cyber security knowledge about their children. By using this response system generates reports based on survey then admin send notifications to particular parents who need training related to cyber security and latest update related to cyber security.

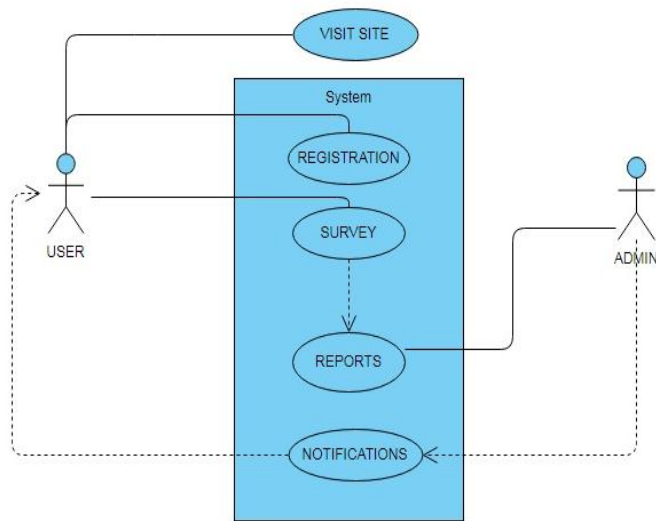


Fig-3: Use Case Diagram of System

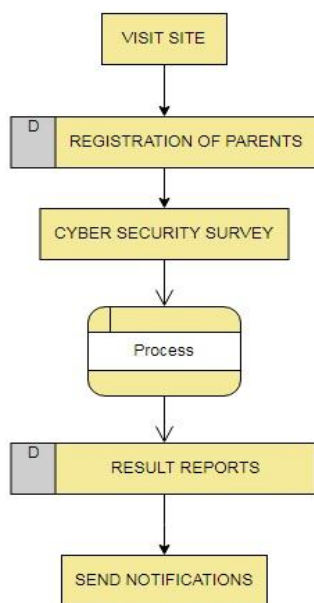


Fig-4: Data Flow Diagram of System

3.1 Features:

The key features of online cyber security situational awareness among parents system project are:

- The project has been coded in PHP programming language with MySQL server database.
- It has the facility of hiding the identity of users or voters in the system. So, the system can be utilized in collecting ideas secretly.
- Besides the survey facility, it provides the e-mail or SMS notification feature for organization.
- Ratio button or check box is used to intake the vote.

- It can be installed anywhere to provide effective survey facility at an affordable cost.

4. CONCLUSION

In conclusion, Cyber Security Situational Awareness among Parents Online Survey System Project in PHP is an excellent software to conduct online survey with minimized economy. The result of the project is accurate and totally error free. With this system, the whole survey process can be conducted secretly by hiding the identities of the people surveyed. The growing use of internet and computers confirms the good scopes of project. By using survey report we can provide cyber security awareness training to particular parents who is not aware about cyber security.

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