Cyber security Awareness in Online Education A Case Study Analysis

ABSTRACT

This study presents to what extent Kyrgyz-Turkish Manas University students are knowledgeable about cybersecurity in the distance education process. The survey was conducted with a sample of 517 students from all faculties of the university at the undergraduate, graduate, and PhD levels. Our research study shows that although huge numbers of cyberattacks are occurring around the world, the students did not have any knowledge about cybersecurity and the effects of cyberattacks overall. An analysis of cybersecurity awareness was undertaken by asking questions focused on malicious software, password security, and social media security. Although we live in an age of technology where our entire lives are indexed to the internet through the distance education process, it has been determined that students have a weak cybersecurity awareness. It has been further concluded that cybersecurity education should be given to prevent the students from becoming a victim of cyberattacks, helping them to use the internet more effectively.

**EXISTING SYSTEM**

Several studies have been conducted to measure the level of cybersecurity awareness among students and academics. For example, Ismailova and Muhametjanova [23] studied the cybercrime risk awareness in the Kyrgyz Republic with 172 participants. The results show that the students were not familiar with cybercrime.

Another survey was done in New Zealand in 2016 to measure cybersecurity awareness among individuals between the ages of 8-21. This was conducted by Trimula, Sarrafzadeh, and Pang. According to the authors, most of the students were

not aware of the presence of cyber threats and they did not know the term cybersecurity [25].

Ahmed *et al.* examined the cybersecurity awareness of the people of Bangladesh [26]. Their research states that the sample did not have enough information about cybersecurity. The authors made a recommendation that a guide should be prepared so then people can become consciously aware of cybersecurity [26]. The Department of Computer Science at Yobe State University conducted a survey that showed that although the students were aware of cybersecurity, they did not know how

to protect the data that they have [27].

Today, social media accounts are very popular among students. Sometimes people can be defrauded and their information stolen through their social media accounts. Kirwan *et al.* conducted a study on this subject involving Malaysian students. They investigated whether the sample of students knew about this subject and whether they had been the victim of this type of fraud [28]. The results of their survey showed that more than 30% of students had been a victim of a social networking site scam [28].

Senthilkumar and Sathiskumar surveyed cybersecurity awareness among college students in Tamil Nadu. They found that the students were able to protect themselves from cyber threats [29]. Zwilling *et al.* conducted a survey among undergraduate and graduate students. The survey was conducted on students from various countries [1]. The results revealed that internet users are aware of cyber risks and simple precautions are taken by them. The authors claimed that there is a link between cyber awareness and cyber knowledge [1].

**Disadvantages**

* The system is not implemented SECURITY VULNERABILITIES AND CYBER THREATS.
* The system is not implemented AWARENESS OF CYBERCRIMES AND LAWS.

Proposed System

Cybersecurity awareness, or information security awareness, has become an important issue today. The number of studies on this subject, which affects every aspect of daily life, is increasing. First of all, defining cybersecurity awareness is important to better gain a full understanding of the subject. Shaw *et al.* defined the concept as; ``the degree of understanding of users about the importance of information security and their responsibilities and acts to exercise sufficient levels of information security control to protect the organization's data and networks'' [16]. As can be understood from the definition, the important points are evaluated in two ways. Firstly, it emphasizes the importance and responsibilities to do with information security. Secondly, it is aimed at knowing and applying information security control practices at an adequate level to protect the information.

Hwang *et al.* defined information security awareness as a phenomenon that aims to enable users to recognize the security vulnerabilities or problems that may arise and to respond in an appropriate way. Naturally, it also intends to keep the security phenomenon on the internet at the forefront of the user's minds [17]. Khan *et al.* made similar points to Hwang. Khan *et al.* defined information security awareness as the fact that users have information about security and act within the framework of the known rules [18].

Zilka, on the other hand, defines cybersecurity awareness as a phenomenon that aims to increase the level of knowledge about the online applications that users use so then they can stay safe in response to online risks [19]. Within the framework of these definitions, it can be clearly seen that security awareness training should be provided to improve cybersecurity awareness [20].

**Advantages**

* Before measuring the level of awareness of an ordinary computer user about the risks of cyberattacks, it is important to determine whether they have basic security knowledge. For this reason, while creating the framework of this survey study, an attempt was made to understand whether the basis of possible unawareness in relation to the field of cybersecurity is a lack of knowledge.
* Since it is predicted that most of the participants are a population that uses passwords, has social media accounts, and installs various software on their computers, the questions were chosen in this direction

**SYSTEM REQUIREMENTS**

➢ **H/W System Configuration:-**

➢ Processor - Pentium –IV

➢ RAM - 4 GB (min)

➢ Hard Disk - 20 GB

➢ Key Board - Standard Windows Keyboard

➢ Mouse - Two or Three Button Mouse

➢ Monitor - SVGA

**Software Requirements:**

* Operating System - Windows XP
* Coding Language - Java/J2EE(JSP,Servlet)
* Front End - J2EE
* Back End - MySQL