

Awareness Level towards the Validity and Reliability of Electronic Information among Students

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Abstract. Landscape of delivery and dissemination of information has changed drastically with the development of electronic communication technologies. Now, the electronic media is one of the main sources of information for youth. The nature of electronic media, which more open and easily accessible making it quick and widespread medium of dissemination. However, freedom in the dissemination of information electronically creates a big issue which is on the validity and reliability of an information, whether the source or content of the information itself. With high dependency on electronic media, information dissemination about something that is not authentic will certainly have negative implications. The information is intended to revolve around political, economic, social and religious. Even worse, when there are youth that influenced by extremist groups such as the group of the Islamic State (IS) in Syria that use electronic media as a medium to influence people. This paper discusses a study on the level of awareness of student on electronic media that focuses on the reliability of the online information on the Internet. The main issues discussed include awareness of the law or act relating to electronic communications and information security, relation of the communication technology to the spread of information, agency or authority responsible for dealing with issues involving electronic media, the reliability of an information from the perspective of Islam and their role as students, da'e (preacher) and technologist to confront issues involving electronic media. This research conducted with 23 students of public universities that are exposed and accessed to information electronically. The respondents are involved, students with a background in Islamic studies and information technology. A case study was given to the group of students to improve their awareness of the importance of validation and reliability of the information obtained. After examining the case studies, the level of awareness of students on the issues is expected to increase compared to before the case studies are given. This study is not only to raise awareness of youth on the key issues raised in respect of the reliability of electronic information, but is also expected to provide a new paradigm for the respondents and disseminate their knowledge to others in line with their role as techno da'e.

Keywords: Information dissemination, reliable information, integrity of information, awareness, cyber law.

INTRODUCTION

Dissemination of information and news easier and faster with the availability of electronic media facilities. Many advantages can be obtained from the latest communication technology, which facilitate our daily life include the personal, business, education and entertainment can be completed with the help of the latest communication technology.

However, there are a few things that need to be addressed so that all the ease and advantages of communication technology is not abused. Among the issues concern the netizens around the world is about the abuse of electronic media as a medium or platform recruiting terrorists. In addition, the spread of the incorrect information is another matter concerned. An information about a country, leaders, artists, athletes and ordinary people have falsified and shared (viral) which and created panic, frustration, and tension in society.

In many cases of fake information are created and disseminated, especially in Malaysia [1] [2], the younger generation must be educated and encourage to become responsible internet users (Netizen) and Malaysian citizen.

Communication Technology and Information Dissemination

Sharing of information online has become the normal lifestyle nowadays. Coupled with a variety of interactive applications with multimedia support makes the Internet more popular. Blog and website application that provides a platform for the delivery of information and the latest news, facilitates writer and news editor. For the end user, the availability of the latest news and archive news also allows them to discover and access a desired information.

The explosion of social media applications such as Facebook, YouTube and Twitter is also seen to facilitate the dissemination of information and news. In addition, an instant messaging application (instant messenger) also contributed to the increase in sharing news and information so demand for the use of the Internet is increasing over time. The 3G and 4G technology has accelerated the process of delivering news to the widespread use of smartphones and tablet devices. In the study, Wei et. al. [3] found that mobile based news-reading behavior rapidly on the rise. Usage of mobile phone to read a news easier with convergence of mobile phone and Internet that enable users to post and follows the mobile news, especially provides by the mobile application like the Twitter-style microblog updates.

However, despite the advances in communications technology, there are numerous challenges to writers or journalist as well as to the end users. Diversification of sources and sharing platform of the online news makes it difficult for the journalist to verify the authenticity if the news received. This problem motivates Schifferes et. al. [7] to conduct a study on the user-centric tool to facilitate journalist to verify particular news from their perspective and needs.

Research Motivation

Students in institutes of higher education are widely exposed to the explosion of information on the internet. Such exposure may be due to the need to access the information for their studies, interest factors, factors of internet addiction and others. Vadivel et. al. [4] found that the students in their university do not have a good understanding of the internet threat and security. Students learn and observe the internet threat or risk with limited information that they had obtained along the way of using the internet. Without formal training of the internet security course, most students used the internet without proper guideline and taken the risk of internet security based on their own perception.

Different studies carried out by Shaharudin et. al. [5] to evaluate their formal training related to the information security. They carried out research on the student's level awareness of information security as they attend a formal training program. They found that the formal training (short course) could improve the student's awareness level towards the information security risk, threats and best practices.

These groups of internet users (students of higher education) are exposed to various threats from the internet which relatively difficult to be tracked and monitored. Among the threats that often occurs is related to internet fraud associated with the theft of personal data, love or psychology manipulation, drugs trafficking, money laundering, rich quick schemes, pornography and others.

A topic related to the reliability of online information was discussed in the tutorial session to observe the knowledge and awareness of the students towards the threat and risk for the internet users. From the discussion session, we found that the student does not have proper knowledge regarding the topic since none of the students can discuss about the given topic neither briefly nor in details. In order to improve the awareness level of the students towards the given topic, they were given an assignment based on the online news captured as a trigger.

The research objective is to evaluate the student's awareness level towards related topic discussed. The research is conducted using the survey approach based on the given assignment and supporting questions.

METHODOLOGY

This section discusses the methodology of the research. The research is carried out based on the action research methodology. The process involves in this research is in a cyclic or looping form with the reflection process as starting point and supported by the preliminary study. The preliminary study is required to obtain the preliminary data in order to validate and identify the real issue. The next process is the planning for action or intervention to address identified issues. After that, action to address the focused issue should be implemented. Observation of the results of the actions taken should be done with the process of collecting and analyzing data. This process is important to evaluate the effectiveness of actions taken. This study can be continued with the second and subsequent loops based on the needs identified problems.

Research Design

The research begins with the preliminary study in order to identify the current issues regarding the course requirement. This paper presents the research conducted for a group of 23 students, represents one tutorial group for second year computer science students. In a preliminary study, students were asked to discuss about some questions regarding their knowledge of topics discussed. From the initial finding, it is found that targeted students are not capable to answer related questions in the class which shows that they did not have proper knowledge and awareness related to the discussed topic.

In order to improve their awareness of discussed topic, a trigger in online news [6] related to a sedition and provocation video is given to them with set of questions assisting them in preparing their report for the assignment. They are given a week to provide a full report regarding discussed topic. The given assignment is as an action or intervention to reflect the student awareness towards the sub-topic of the internet and network security course.

For the evaluation of the effect of the given assignment, the student are given a set of questionnaire that consist of six (6) questions related to their awareness towards reliability and verification of online information, four (4) question related to students' roles and two (2) additional questions for *Naqli* and *Aqli* integration related to discuss the topic. In this paper, we will focus on the first two parts of questions which represent the awareness of the students towards the reliability of the online information and their roles to deal with the communication technology challenges.

Questionnaire Design and Development

The questionnaire is designed based on the knowledge required by students in related topic which focus on reliability and integrity of online news. In addition, the questionnaire also includes four (4) questions about the students' roles in facing the challenge in the digital world.

Based on student feedback from pre-survey session, which indicates that there are needs to evaluate their awareness regarding the required knowledge in the scale format. The scales are as the following:

- 1 - Not aware at all.
- 2 - Limited awareness of some part of the topic.
- 3 - Aware but cannot discuss more.
- 4 - Aware and can briefly describe related sub-topic.
- 5 - High awareness with confidently discussed related topic in details.

RESULT AND DISCUSSION

This section presents the results for the question related to the topic and the roles of the students in dealing with the digital era challenges. The focus topics relate to the reliability and integrity of digital news and information dissemination including the Malaysian law related to the digital contents and information system infrastructure,

enforcement agencies, related technology, the needs of information verification, the importance of reliable information, and the techniques for information verification. The result from the survey are following:

Demographic

A total of 23 of second year students participated in the survey. The students are from the Bachelor of computer science program and is in the same tutorial group. From the total students, 17 of them are female and 6 are male students. Two of the students are international students while the rest are Malaysian students.

TABLE 1. Summary of the student's awareness level based on six (6) questions related to online news reliability and integrity.

Awareness Scales	K1	K2	K3	K4	K5	K6
1 - Not aware at all.	0	0	0	0	0	0
2 - Limited awareness of some part of the sub-topic.	0	1	0	1	2	0
3 - Aware but cannot discuss more.	6	2	4	5	9	6
4 - Aware and can briefly describe related topic.	7	8	6	9	4	10
5 - High awareness with confidently discussed related topic in details.	10	12	13	8	8	7

Table 1 presents the summary of the first part of the questionnaire which measures the level of the student's awareness towards the needs of reliability and integrity of the online news. The following sub-section discusses the details of the results.

K1 - Technology Related to Dissemination of Online News

One of the elements to measures the student awareness level about the online news and information is about the available technology related to online news dissemination. In this sub-topic, the result shows that none of the students claim that they are in scale 1 and scale 2 which can be considered a good level of awareness for this sub-topic. The result shows that 10 students claim they have a high level awareness about the sub-topic compared to 6 students in the scale 3 which is the minimum score in this sub-topic.

K2 - Importance of Reliability and Integrity of Online News.

As future generation, students must be concerned about the reliability of any obtained information includes the online news before spreading the information to others. The result shows mix scores with a student claims that he/ she in the scale 2 which has limited awareness level, but 12 students claims that they are in scale 5 which in highest awareness level. The student with the lowest scale should try to understand the trigger and question given in order to improve his/ her awareness level since other students claim that they can get what they should obtain from the assignment.

K3 - The Importance of Verification of the News.

A continuation of the previous elements, students also need to be aware of the need to verify any news before being shared or disseminated to others. Awareness level for this topic can be considered good as 100% of the student's claims that they are in scale 3 to 5. In addition 13 of the student's claims that they are in scale 5 which is the highest number of claims in for this topic as well as compared to the other topic. High level awareness of this element can reduce the dissemination of fake information cases.

K4 - Technique of Validation and Verification of Online News.

In addition, in order to verify the reliability of the online news, student should aware about the technique or approaches of verification related news before decided to share the news or not. The verification can be based on the contents or the sources of the news. With the minimum score in scale 2 (1 student) and maximum score in scale 5 (8 students), it shows that the given assignment is useful in improving the student awareness level. Limited awareness (scale 2) by a student may be due to a lack of understanding of the questions that came with the video. The question should be more specific related to this element in order to give clear understanding to the students.

K5 - Malaysian Law Related to the Digital Contents and Information System Infrastructure.

As computer science students, respondents should aware regarding the Malaysian law that related to the computers and digital contents. However, less than 35% of the students claim that they are in scale 5. Two (2) students claims that they have limited awareness about the law. It may cause of the student themselves did not properly understand the video and support question given that clearly mention about the requirement to discuss about the law related to digital contents. In addition, the complicated language in the law term may also contribute to this result since the students feel not confident to discuss in details about the related law.

K6 - Enforcement Agencies to Address the Abuse or Misconduct of Digital Content and Information System Infrastructure.

In addition, awareness about the laws or act must be followed by awareness about the agencies or enforcement bodies that enforced related laws. In the case of given video, information and responsibility of agencies that has power in enforcing the law related to the digital contents, Islamic understanding, information security and social security should be aware by the students. The result shows that ten (10) of the students claims that they are in scale 4 which are aware and can briefly describe related sub-topic. Six (6) of them claims that they are in highest scale (scale 5) who are in high awareness with confidently discussed related sub-topic in details. Overall result shows that the student's awareness level regarding this topic is acceptable due to none of the students claim that they in the scale 1 and 2. The information about the enforcement agencies can be obtained easily by browsing through the online news related to the given trigger.

TABLE 2. Summary of the student's awareness level based on four (4) questions related to their roles in dealing with online news and communication technology.

	R1	R2	R3	R4
1 - Not aware at all.				
2 - Limited awareness of some part of the sub-topic.	2	0	1	0
3 - Aware but cannot discuss more.	1	3	5	1
4 - Aware and can briefly describe related topic.	7	9	9	7
5 - High awareness with confidently discussed related topic in details.	13	11	8	15

Roles as Techno Da'e (R1), Student (R2), Technical Person (R3) and Muslim (R4)

The survey question continues with the awareness about the student's roles as shown in Table 2. In the first roles, they are asked about their roles as techno da'e or preaches (R1). They utilized the technology to disseminate the knowledge and Islamic teaching to others in a creative and innovative way. The second roles as a student (R2) who have utilized the communication technology in proper and ethical way. As the technical person (R3) they are asked to put their level of awareness regarding to securing the online communication from misuse of the digital devices and infrastructure. Lastly, as Muslim (R4), they asked about their awareness level toward their roles to protect Islam in cyberspace from being manipulated. Overall result shows that a good level of awareness of the students toward their roles. Although R1 and R4 can be grouped together, the

result shows the difference score. The difference score indicates that some students think that they only a Muslim without aware that they are also a da'e.

CONCLUSION

The awareness level of the students towards the importance of the reliability and integrity of online news or information is very important to minimize the risk of dissemination of wrong information among them. The finding shows that the given assignment have improved the student's awareness level regarding the discussed topics. The majority of the students obtained significant benefits from the report prepared for the given assignment. Although two (2) of them claims that their awareness level not significantly improved, it can be considered as an isolated case since more than 90% of their classmate claims that they are in scales 3 and above. Therefore, the isolated case needs another way of teaching and learning approach in order to improve their level of awareness towards the discussed topic.

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