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A Preliminary Investigation: Feasibility of an Interactive Multimedia Application In Increasing Knowledge And Awareness Of Cyber Bullying Among Adolescents

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Abstract

This paper describes a preliminary investigation of how the capabilities of an interactive multimedia application may be used to raise understanding and awareness towards cyber bullying among adolescents. Nine respondents were selected to participate in the interview ranging from three parents, three primary school students and three Secondary school students from Kedah and Perlis state of Malaysia. The findings of the interviews and literature reviews confirm that there is a lack of knowledge and awareness that needs to be addressed among adolescents especially in Malaysia. The paper also concludes that an interactive multimedia application needs to be designed and developed to increase knowledge and awareness on cyber-bullying among adolescents.

Keywords: *cyber bullying, preliminary investigation, interactive multimedia*

Introduction

The issue of bullying has long been a topic of discussion amongst educationists, academicians and researchers. Bully causes individuals to feel hurt, pain, embarrassment, fear, loneliness, isolation and sadness. Bullying is not limited merely to physical conduct like beating, kicking, pinching or pushing someone. Bullying also exists in other forms as in speech, by calling someone names, cruel jokes, threatening or slandering. Now, there is a new channel through which someone is bullied, and that is through the Internet and other ICT devices like smart phones. This form of bullying is known as cyber bullying. Willard (2005) defined cyber bullying as sending or posting harmful texts or images through the use of digital communication devices.

Like traditional bullying, cyber bullying victims are also exposed to the negative consequences of this phenomenon. They might isolate themselves especially from school activities, become stressed, and possibly contemplate suicide (Willard, 2005). Victims of bullying are usually afraid of complaining to adults about the incidents that have befallen them. This is because they are concerned that they may be forbidden to access the Internet and that they may not be allowed to use smart phones and computers after the complaint is made. In contrast to traditional bullying which usually occurs in schools, cyber bullying frequently occurs at home. This causes the affected individual to feel that there is nowhere else that they can seek refuge at (Wolak & Mitchell, 2000).

Multimedia offers exciting possibilities for meeting the needs of the new generation learners. Neo and Neo (2001) defined multimedia as “the combination of various digital media types, such as

text, images, sound, and video, into an integrated multisensory interactive application or presentation to convey a message or information to an audience.” In multimedia learning, the delivery of instructional include visual and auditory information and learners use of this information to construct knowledge. According to Mayer (2001), people learn better from words and pictures than from words alone. In this perspective, words include written and spoken text, and pictures include static graphic images, animation and video, or in other word, multimedia.

Findings

Literature review and preliminary investigation were conducted in order to gain in-depth understanding on the current situation of cyber-bullying and the need to raise the knowledge and awareness of this phenomenon among adolescents. The findings of these activities will be discussed in the next sub-section.

i. Literature Review

Literature review was conducted in order to understand the current situation of cyber-bullying among adolescents in Malaysia and to investigate the technologies being designed, developed and used for cyber bullying intervention.

a) Cyber-bullying and adolescents

With the advances in technology, most adolescents use Internet technology to create social relationships through social websites such as Facebook, Twitter, Friendster, etc that offer interesting and enjoyable functions. It cannot be denied that social websites such as these have many plus points and advantages such as the ability to connect and discuss current issues in cyber space. Nevertheless there are also disadvantages as its usage is without control (Willard, 2007).

Generally, adolescents today are knowledgeable about computer technology but they are not mature enough to understand the implications of their online activities and as a result, many adolescents are caught in unhealthy activities and social problems within the cyber world, such as cyber-bullying (Guan and Subrahmanyam, 2009). There are various negative effects resulting from cyber bullying. These include the possibility of someone facing psychological function deficiency and other problems such as being anti-social, anxiety disorder and depressive symptoms (Cappadocia, 2008; Tynes and Giang, 2009; Wolak, et. al, 2007).

Most victims of cyber-bullying are frequently distracted, feel low esteem and have a tendency to commit suicide (Patchin & Hinduja, 2006). A study on cyber-bullying amongst adolescents found that 33% of the respondents admitted that they were victims of cyber-bullying, while 22% of adolescents felt sadness and wished to commit suicide as a result of cyber-bullying (Patchin and Hinduja, 2006).

A study by Beran and Li (2005) found that victim of cyber-bullying were less likely to attend school, could not concentrate on their school-work, and received lower grades than students who were not bullied. Beran and Li (2005) also found that victims of cyber-bullying experienced feelings of anger and sadness. According to a study conducted by Patchin and Hinduja (2010), both victims and offenders of cyber-bullying have significantly lower self-esteem than those who had little or no experience with cyber-bullying.

From the above studies, it can be concluded that cyber-bullying can leave enormously negative impact on the public generally and on adolescents specifically. Therefore appropriate measures should be taken to curb this menace. Developing an interactive multimedia application that is able to provide knowledge and awareness to adolescents is one of a measure that can be taken to overcome this problem.

b) Cyber-bullying in Malaysia

In Malaysia, cyber bullying cases that are becoming more rampant in schools pose a new challenge for educationists and parents. The Deputy Minister of Education was reported saying that the spread of false information, written texts that demean, degrade and threaten through the short messaging system (SMS) and Internet as well as video recordings that are circulated amongst students can have emotional consequences in victims. Cyber bullying may be a new disciplinary problem in this country but it has long been widespread amongst students in Western countries that have caused mental anguish. It has lasting consequences on victims when faced with such overwhelming stress (Dahari, 2008).

A Head of Business for Norton South-east Asia, was reported saying that cyber bullying are generally perpetrated by adolescent boys or girls, and troubled adults who harass, scare and embarrass others through SMS, e-mail, short messages in chat rooms, social networks and websites, including online gaming. He says that even though this phenomenon is not as serious as it is abroad, nevertheless, the advent of social bullying has started as more and more adolescents and adults misuse telecommunication technology for their own satisfaction by channeling their anger through this medium (Alias, 2010).

Research carried out by Norton Online Family has found that children in Malaysia spend an average of 19 hours a week browsing the Internet. It all happens after exposure to technological games and gadgets like laptops, iPads, iPods as well as a variety of smart phones like the iPhone and Blackberry. We should not, however, lay the blame squarely on the children. This exposure has resulted from parents who, instead of giving their children the attention the children are seeking from them, give them those highly advanced technological “toys”(Halid, 2011).

c) Technologies being used for cyber-bullying intervention

Beside formal prevention programs being conducted in schools, there are several technologies put forth throughout the world to deal with the issue of cyber bullying (Table 1). Most of the existing applications usually emphasize the dissemination of information concerning cyber bullying to the general public through websites and portals. There are also several applications developed for children and teenagers that guide on how to deal with cyber bullying.

Table 1: The Different Type of Technologies Being Used For Cyber Bullying

Technology	Sources	Description
Website/ portal	Cyberbullying.us Cyberbullying.org	<ul style="list-style-type: none">• These websites gives information about cyber-bullying and provides options for getting help.• Focusing on establishing understanding and awareness among children.

		<ul style="list-style-type: none"> • Contents of these websites are rather static and contain more text compared to other multimedia elements • Could be less attractive for adolescents
Game based application	Alex Wonder Kid Cyberdetective	<ul style="list-style-type: none"> • This game application was designed to educate students in grades 4-8 regarding cyber-bullying. • Focusing on how children could stay safer online and avoid cyber bullies. • Information about cyber-bullying is quite limited
Multimedia / animation	BrainPOP educational animated movie on cyber-bullying	<ul style="list-style-type: none"> • Emphasize on security issues and prevention of cyber-bullying. • Focusing on creating understanding and awareness on cyber-bullying • Crucial information such as examples of cyber-bullying behaviour needs to be included
	Chris Webster's cyber-bullying page	<ul style="list-style-type: none"> • Using simple animation in an interactive website • Give general information on cyber-bullying to the communities • The graphics used are not really appealing and quite confusing. • The information that is given about cyber-bullying is rather limited.
Virtual Reality/ Simulation	Cyberbullying Virtual Scenarios	<ul style="list-style-type: none"> • Using SecondLife, an online virtual world to create scenarios and simulations of cyber-bullying incidents and how to deal with it. • Aims to give information on coping strategy. • Important sub-topics such cyber-bullying behavior are not included.

Even though there are few technologies that have been developed specifically to provide knowledge and awareness on the topic of cyber-bullying, nevertheless, there are still several flaws, especially from the aspect of content and presentation of the applications. This underlines the need for the development of a multimedia application that is more comprehensive and interesting that is appropriate within the context of adolescents in Malaysia. This situation motivated the researcher to develop a multimedia application in Bahasa Malaysia to provide knowledge and awareness about cyber-bullying specifically for the adolescents in this country.

ii. Preliminary Investigation

The researcher had conducted a Preliminary Investigation (PI) to gain in-depth understanding of cyber-bullying issue among adolescents in Malaysia. Unstructured interview technique has been chosen to investigate the current level of knowledge and awareness of cyber bullying among adolescents and the prevention programs that have been implemented in schools. During the PI, the researcher interviewed a cyber-bullying expert, five secondary school students and three parents to gain in-depth understanding regarding this issue.

a) Interview with cyber-bullying expert

The researcher had interviewed a senior lecturer from a public university who is also an expert in cyber-bullying. According to him, knowledge and awareness about cyber-bullying amongst adolescents in this country is still at a low level. His opinion is in tandem with the results of the Microsoft Global Youth Online Behavior Survey which found that knowledge and awareness about cyber-bullying was below average in Malaysia (*Microsoft Global Youth Online Behavior Survey*, 2012).

With more than five years' experience in studying this phenomenon, the expert stated that cyber-bullying had become more serious recently and was a global threat that must be addressed. Cyber-bullying does not only happen abroad, it is also escalating in Malaysia. Furthermore, according to this expert, the group that is most vulnerable to this threat is adolescents.

The expert added that most adolescents have not been exposed to what cyber-bullying actually means, for example, the acts of cyber-bullying and its dangers. They are also clueless on how to deal with and eradicate it. This expert also opined that adolescents would normally not report it to their parents, school or the relevant authorities if they were being bullied online or if they knew of a friend who is being bullied. They are more inclined to keep it to themselves or to tell their closest friends.

b) Interviews with adolescents

The researcher had the opportunity to carry out an unstructured interview with five secondary school students to validate the research problem. The participants comprise three girls and two boys aged between 13 and 16 years. All of them have Internet access at home. All five participants own a Facebook and Instagram account, at least one email account and smart phones. Two of them also own Twitter accounts. All are familiar with WhatsApp, WeChat and SMS services. One is also an active blogger.

These five adolescents revealed that almost all their classmates have Facebook, Instagram, WhatsApp, WeChat and email accounts and several have their own web blogs. All of them agreed that the applications most frequently used to communicate with their friends are the WhatsApp and WeChat, followed by Facebook, Instagram, SMS and emails. These students have also been found to have used the messaging application on Facebook to chat with their friends. They also read and are followers of their friends' web blogs.

Despite admitting that the communication technology that they use is extremely beneficial in helping them to communicate with friends and teachers, all five students did not deny that there are unhealthy elements within the virtual world. These adolescents also revealed that social networking sites such as Facebook and Twitter have been wrongly used to spread slander and inaccurate information, to criticise friends, gossip and argue.

When asked about cyber bullying, all five students admitted that they were not certain of what is meant by "cyber-bullying" exactly or its characteristics. Three students have also not gained exposure to cyber-bullying before this, neither through their parents, teachers, readings or the mass media. Two students stated that while they had heard of cyber-bullying, they did not fully

understand this issue. They did not consider cyber-bullying to be very serious nor did they think that it could seriously endanger adolescents.

After being given an explanation about the definition and characteristics of cyber-bullying, all of the students admitted that they had been involved with this phenomenon, or at least know of friends that cyber bullied or have been cyber bullied. One boy who had bullied admitted that he has, on several occasions, criticised a classmate on the Facebook. Using the flaming method, the boy has the intention of making fun of that friend. Nevertheless, he did not think that his actions were acts of cyber-bullying.

A girl admitted that she had circulated emails that revealed the secrets of someone who had been a close friend to her school mates. This happened because she wanted to get back at being bullied by that friend whereby that friend had spread gossip about her on the Facebook. This accident could be associated with outing and trickery method of cyber-bullying. Other than the actions stated above, the three adolescents revealed that they had heard and known of friends who had been cyber bullied through acts like slandering, spreading untrue stories, hacked accounts and such.

When asked about what action they had taken after they had been bullied or what action they would take if they were bullied in the future, four students said that if the incidents were not serious, they would not complain to their parents or teachers. They would instead feel more at ease sharing the experience with their peers. Three of the adolescents revealed that their parents rarely monitored their online activities for example, finding out which websites they were browsing and the contents of what had been posted on the Facebook. Only two of the five students admitted occasional monitoring by parents but one of them had removed the mother from the “Friend” list on Facebook to keep the parents from finding out about their online activities and also out of concern that the parents would not allow further Internet access.

c) Interviews with parents

At this preliminary investigation phase, the researcher held an interview session with two mothers and a father. They were parents of secondary school students from a school in Perlis. When the matter of cyber-bullying was introduced, all three did not appear to fully grasp the concept whereby two of the parents revealed that they had never had any exposure to it before this. The other parent had heard about cyber-bullying but had not been too concerned about it before the interview.

Two of the three respondents admitted that they rarely monitored their children’s online activities due to work commitments and time constraints. They were uncertain if their children had ever been cyber bullied or not. One of the parents said that even with constant monitoring on online activities, there had never been any discussions with the children concerning safety and privacy as well as bullying in the virtual world.

After being given an explanation about the definition and characteristics of cyber-bullying behaviour, all three parents agreed that their children might probably have been or will be involved with this phenomenon if they were not monitored. All the parents were of the opinion that the

problem of cyber-bullying is a serious problem that could distract their children's attention from learning as well as have negative consequences on their children's psychological growth.

Discussion and Conclusion

As a result of the preliminary investigation, it may be concluded that cyber-bullying clearly is present in our society of late especially amongst adolescents. Nevertheless, the understanding and awareness of the adolescents regarding this issue is still at a very low level. The effort to increase understanding and awareness should be extended to all levels of society especially amongst adolescents and several methods and efforts should be taken.

Other than creating awareness through seminars, talks and the mass media, awareness can also be heightened through the use of appropriate technology and tools. Although there are few technologies that have been developed specifically to provide knowledge and awareness on the topic of cyber-bullying, nevertheless, there are still several flaws, especially from the aspect of content and presentation of the applications. With today's technology, an interactive multimedia application would be an appropriate medium to instill knowledge and awareness amongst adolescents concerning the ever-growing menace of cyber-bullying.

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