A Strategy To Enhance E-Safety Among First Year Students at Zimbabwean Universities

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ABSTRACT

The widespread usage of ICT provides considerable opportunities for the society. However, there is extensive evidence that through the use of ICTs students will be exposed to different e- safety challenges and risks. E-safety challenges faced through the use of internet and social media can be exposure to inappropriate content and communicating and meeting the strangers, cyber bullying, ICTs' addiction and cyber-harassment. Therefore, the aim of this action research is to develop a strategy to enhance e-safety among first year students at Zimbabwe Universities. The overarching research strategy was action research using some qualitative research methods to gather the information on the e-safety uses, risks faced by students and how these risks can be mitigated. Data was collected using online questionnaire, group discussion, observation of first students at Zimbabwean University. The research was iterative and there were two cycles done and the findings culminated into a strategy being formed using the WHAT, WHO and HOW. This research contributes to the existing body of knowledge by providing a clear strategy to deal with e-safety challenges in Zimbabwean universities. Furthermore, this research is deemed to be significant for understanding the future of ICT use in developing countries like Zimbabwe.

Keywords: *E-Safety Strategy; Information and Communication Technologies, Cyber Bullying*

Received: January 2019 **Accepted:** May 2019 **Published:** July 2019

INTRODUCTION

Information and Communication Technologies (ICT) has become crucial and has essentially permeated all facets of the economy, affecting every sector (Carvalho, Francisco, & Relvas, 2015; Demirer, 2016). According to Imhonopi and Urim (2015, p. 4) ICT – "encompasses all those technologies that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronic systems, and among electronic systems". The promulgation of ICT is becoming the central to the global, regional and local socio-economic transformation, in addition to being an critical resource and essential of every economic activity (Kabanda, 2015). Furthermore, ICT can accelerate foundation of every economic activity such as education, consumption, investment, government services delivery and export competitiveness (Jorgenson & Vu, 2016).

In the educational sector, ICT is shaping the future of education and learning (Schmid, 2016). When used appropriately, different ICTs help to extend the access of education, strengthen the relevance of education to the increasingly digital workspace, and raise educational quality by, among others, helping make teaching and learning an engaging, activate process connected to real life (Veletsianos & Kimmons, 2016). Thus, ICT can largely contribute to achieve universal education through the delivery of education and the training of teachers, as well as the offering of improved conditions for lifelong learning. Such lifelong learning involves people that are outside the formal education process and thus also improving professional skills (Nicholls, 2014). Furthermore, ICT can improve critical thinking, information handling skills, the level of conceptualization, and problem-solving capacity (Liem, Martin, Anderson, Gibson, & Sudmalis, 2014).

Despite all the advantages of ICT, there are inherent challenges which include the safety concerns. Safety when using ICT resources is often referred to as e-safety. Vanderhoven, Schellens, Valcke and Montrieux (2015, p. 12) defined e-Safety as follows: "E-Safety encompasses not only internet technologies but also electronic communications such as mobile phones and wireless technology". It highlights the need to educate students and young people about the benefits, risks and responsibilities of using information technology. E-safety provides safeguards and raises awareness to enable users to control their online experiences. E-safety education and awareness should be raised to improve the behaviour levels of individuals who use the internet.

BACKGROUND OF THE RESEARCH

Previously, schools and pre-university colleges in Zimbabwe did not permit their student to bring electronic mobile gadgets to school (Bhukuvhani, 2017). These schools and colleges therefore, disregarded the fact that students had access to electronic gadgets after school and at home without any guidance from home or schools. This was because some parents were ill-prepared and unaware of the activities their children get while using their electronic gadgets. Thus, this left students on their own without guidance and at risk of suffering negative consequences of using these electronic gadgets. Most parents lacked knowledge on how to use, monitor and give guidance on the use of these gadgets as compare to their children. Under most circumstances, the parents and guardians do not understand their children's cyber activities (Bryant, 2013; Chung, 2004). Consequently, this lead to additional concerns, because they did not have the education and expertise to keep their students protected and safe from online predators (Fisk, 2014). Tomczyk and Kopecký (2016) postulates that it should be the responsibility of schools, universities and teachers to raise e-Safety awareness amongst students and young people than and other role players.

Hence, the focus today is no longer on whether technology should be integrated into the school setting, but on how their integration should be done safely to benefit all parties in a typical school or university setting. Basing on this background, this study seeks to develop an e-safety strategy for first year students in at university in Zimbabwe. Furthermore, in an effort to enhance communications with students, WhatsApp groups for the two classes have been set for all the previous successive classes. Over the years, it has been observed that most students ridicule others, just send a lot of irrelevant messages which have nothing to do with education, obsessed with sending jokes, and some unnecessarily send much time on WhatsApp. This shows that the use of ICT without proper training may cause harm to the students themselves and their colleagues who they ridicule, or cause to spend more time on non-educational activities. This shows poor level of e- safety awareness and that most students are ill-prepared, as well as lack knowledge of ICT risks and more importantly are unaware of how to deal with e-safety challenges. In an effort to study this problem in detail it was decided to study a first year, Media and Society Studies Second group at local university. Since action research is systematic, the

whole research comprises of the following 3 sections which are the pre-intervention, intervention and post intervention phase as shown in Table 1.1 below:

Table 1.1

Sections of the research study

Section	Phase
One	Pre-intervention phase
Two	Intervention phase
Three	Post-intervention phase

Most Zimbabwean students who were denied access to use electronic gadgets at schools and colleges are now entering universities where they will have more accesses even though they have not been properly trained to use the gadgets thereby facing risks introduced by ICT. Hence, the objective of this study is to come up with a strategy to enhance e-safety among first year students. In order to fulfil the above research objective, the methodology to be followed will be action research. Action research tend to be qualitative, cyclic, participative and reflective (Herr & Anderson, 2014). Action research suggests four linear but iterative steps for conducting research which are plan, act, observe and reflect (Stringer, 2013).

The planning process enables the identification of the target population and determines the sources of date and the selection of a sample. The sample included one state university, Midlands State University (MSU) which is the largest university in Zimbabwe in terms of student population (Mupfiga, Mupfiga, & Zhou, 2017). Midlands State University runs a Master's program in Safety, Health and Environmental Management. This program attracts mostly safety officers who are practitioners from the mining industry. The researcher, had to take advantage of the permission given by Midlands State University to have a group discussion on safety with those students.

The act process is when the intervention is carried out. Data has been collected from group discussion with students from the Masters of Safety,

Health and Environmental Management, on how they promote safety awareness and impart safety consciousness in their employees in their organisations. The discussion mainly focused on how mines impart and reinforce safety awareness consciousness in their employee. Reflection involves understanding and reflecting on the safety strategies of the mines. The reflection was based on observed outcome during the interventions. The next iterative stage involved applying the strategies and what could have been learnt from the discussions with MSU students.

The first stage as alluded earlier also involved the identification of the target population. The target population included first years studying Media and Society studies, which the researcher was teaching an introduction to Information Technology course. This is a compulsory module for first year students irrespective of their area of study. Each Computer Science lecturer is allocated a class to teach this introductory module. The researcher was allocated to teach Media and Society Studies students in the Faculty of Social Sciences. There are two classes namely conventional class which consists of 72 students and parallel class consisting of 100 students. Conventional class are students who are enrolled on the normal degree programmes. Parallel class consists of students who pay full fees and their studies after working hours and during weekend. In addition they do not receive any grants from the government. Therefore, these classes have their lectures separately even though they do the same subjects under the same lecturers.

RESEARCH METHODOLOGY

The questionnaire was developed after strategies were synthesised from the discussions with students from programme in Safety, Health and Environmental Management. Observations were made on the students on Media and Society studies. After a reflection on the results of the observations and the process continued until the most appropriate strategies had been identified which were used to design the most appropriate strategies for promoting e-safety. The physical appearance and layout of an online questionnaire is very important. It must be attractive and eye-catching (Cohen, Manion, & Morrison, 2017). Cohen et al. (2017) also mention that compressed and cluttered questionnaires are uninviting and discourage respondents.

An online questionnaire was administered to the students to understand their current level of safety awareness. An online questionnaire was administered to allow the students to complete in privacy to ensure anonymity and

further more to allow students to respond at the most convenient time. The survey has been posted online and the questionnaire link was send to the WhatsApp platform, e-mail, and the link was also send to students using the students' e-learning platform.

Netnography

Kozinets (2016) defines netnography as a novel, innovative and unobtrusive qualitative research methodology that adapts and applies ethnographic research techniques to the study of computer-mediated communications. Mkono (2017) argues that the rapid developments in social networking technologies have seen internet users posting messages, reviews, compliments, complaints and comments on message boards. These message boards provide a hunting ground for researchers in an unobtrusive and anonymous way to gain in-depth understanding into users' thoughts, opinions, motivations and concerns (Massa, 2013). Moraes, Michaelidou, and Meneses (2014) note that the use of pseudonyms and the anonymous nature of the online interactions allow for unsolicited comprehensive, rich and candid accounts of internet users. Compared with other qualitative data collection methods, netnography is less time consuming, unobtrusive and generally less costly (Elliott et al., 2005 ; Lynch & Mah, 2017).

For this research, netnography can be adopted as part of non-participant observation to triangulate with data collected from questionnaires completed by respondents. The main reason for choosing non-participant observation ensures that the researcher understands the WhatsApp messages posted by students on the class WhatsApp platforms. It was not possible to get permission from the University to open a social media platform for the classes. Accordingly, the comments on WhatsApp complement the data gathered from the questionnaires. However, Mkono (2017) cautions on the use of netnography for three reasons: firstly, researchers do not have direct control over the content of respondents 'text; secondly, the authenticity of the respondents 'claims cannot be verified and thirdly, the researchers have no access to non-verbal communications and this tends to limit the richness of the data.

Triangulation

In this research a variety of data collection methods were used. This is generally referred as data triangulation. Data triangulation uses a variety of data collection techniques to study a phenomenon in a variety of ways

(Tunarosa & Glynn, 2017). Furthermore, it enables findings from one data collection method to be validated or compared with data from another method. Hence, triangulation is beneficial because it offers multiple perspectives on a phenomenon. Additionally, it provides more information on emergent concepts, which permits stronger authentication of a phenomenon (Venkatesh, Brown, & Sullivan, 2016). Action research allows a variety of data collection methods which helps to test the dependability of results.

Action Research

This section seeks to fulfill the core objective of this research, which is to come up with a strategy to enhance e-safety among first year Media and Society Studies students at the Midlands State University. The overarching methodology for this research was an action research approach. Action research can be defined as a form of collective self- reflective research carried out by respondents in their social or educational practices, over and above understanding practice. Action research involves collaboration. Consequently, action research can only be achieved through examining action of individual group members. The main goal of action research in education is to involve educators to improve their teaching practices by critically examining their practice as well as changing their long held beliefs and understanding. Action research was deemed necessary for this research for two reasons; firstly, it creates an environment or situation where the researcher and students collaboratively overcome the challenge of lack of e-safety awareness. Secondly, the research required systematic research procedure which involves careful planning. Consequently, the researcher had to develop an action plan. Then act on the plan, observe and reflect on the results of the observation. This process is iterative. After all the iterative process a strategy will then be formulated.

Forrest-Lawrence and Collier (2014) refers to e-safety as way of ensuring that children and young people are protected from harm and supported to achieve the maximum benefit from new and developing technologies without risk to themselves or others. A study by Williams and Pearson (2016) described e-safety as the school's ability to safeguard and educate students as well as staff in their use of technology. It also includes having proper mechanisms to intervene and support any incident where appropriate. In carrying out this research, e-safety relate to the safe and responsible use of Information Communicating Technology (ICTs), including computers, the internet, mobile and communication technology devices and technology tools that are designed to hold, share or receive information for example mobile phones, digital cameras and pagers.

FINDINGS AND DISCUSSION

The researcher carried an intensive literature study on e-safety and various e-safety risks outlined in section 1.7.1. Having understood, the key components, the researcher administered 172 questionnaires to first year Media and Society Studies class online, he was teaching a Module Introduction to Information Technology. The purpose of questionnaire was to see if they were aware of e-safety issues. Furthermore, the research went on to set two WhatsApp groups which the researcher was a co-administrator. WhatsApp is most popular social network among the university students. The first group included Conventional Media and Society Studies and the other group was Parallel Media and Society Class. The Parallel class acted as the control class. The purpose of the questionnaire was to establish the awareness levels the situation was. A total of 159 out of 172 questionnaires were completed. This represented 92% of respondents. There was no variation on the results between Conventional and Parallel students. Some of the responses were when asked how they would react when they receive a text, email, photograph, video, comment or tagging that is humiliating;

> *"I will revenge if I know the person but if I don't know I will just keep quite."* R3. The other response was " *I will be furious*" R4 and went further to say "*I will be hurt and unfriend the person*". On the same question another response was " *mmm depends with your relationship with that person...if you close I do not think its that's wrong...but if u don has such a relation its wrong."R107. A total of 60* respondents wrote simply *"ignore"* and 20 respondents said *"delete immediately".*

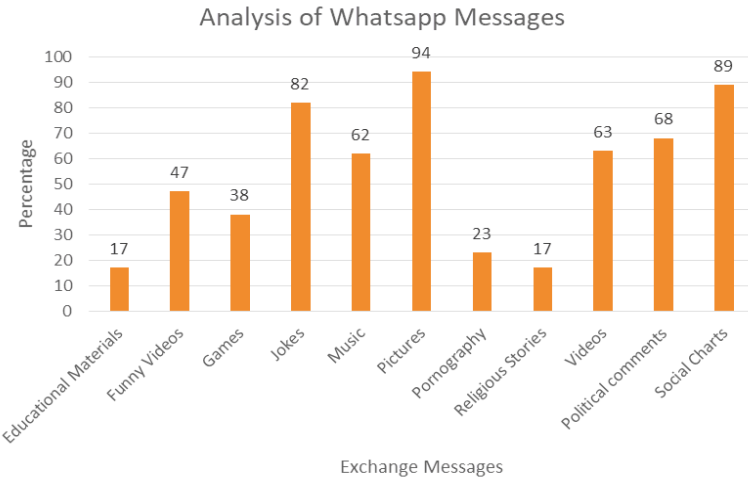
The other response when asked why they record a video or taking pictures by cell phone while a group laughs and forces another person to do something humiliating or ridiculous responded "*Good memories*" R138. Another response was "*some people deserve it. It's a tit for tat kind of thing. If you humiliate me in the real world, it's much easier to resort to online retaliation as it is easier and much more effective.*" R115

Consequently, the results of the questionnaire established that 133 out of the 159 respondents representing 83% of respondents had suffered from at least one e-safety challenge or had caused someone to suffer from e-safety challenge. This confirmed that e-safety challenges were rampant in

the Midlands State University, with students openly abuse cyber space using ICT gadgets and social networks to torment fellow students. Most respondents did not have a clue how bad this situation is because the person suffering from e-safety challenge was only known to those invited to a specific group on a specific cyber forum. The WhatsApp group showed similar results as the group out of about 651 Messages during the first period under review only 17 % had to do with academic work. The rest were jokes, forwards and insults as shown in Table 1.2.

Table 1.2

Analysis of WhatsApp Messages



The results of the research showed that e-safety awareness was indeed low among the university students and there was indeed for an e-safety strategy as most students most of their time on non-educational material. It is also sad to note that the volume of messages may indicate high level of addiction to social media. This is in agreement with the findings of Kissinger (2017) who argues that many citizens are not aware and are not prepared for e-safety challenges. Furthermore, there is high level of sending of music which also indicate lack of appreciation of intellectual property rights. High number of pictures may also indicate vulnerability of cyber bullying, and pictures that ridicule people in certain areas of Zimbabwe causing regional and tribal tensions. Having discovered that there was indeed low level of e-safety awareness among the students it was necessary to see how other sectors

which require high level of safety are dealing with safety challenges. This led to the second activity to find out how the mining sector was dealing with e-safety challenges.

Cycle One: Activity Two

From the first activity it was established that there was indeed lack of e-safety awareness among the university students. As a result, there was need to establish a strategy to ensure e-safety awareness. The researcher decided to have a group discussion with 25 students of Master of Science in Safety, Health and Environmental Management degree. Most of the students (17) were drawn from the mining sector or had some experience in the mining sector. The discussion only involved the students who had experience in the mining sector. The rationale of choosing this class was that the students had experience from different mining organisation. Furthermore, this provided multiple views, experiences from different mines. The students were free to give information without any fear and bias.

The following key issues used by mining organisations were found. Every employee is adequately oriented before being accepted as an employee, furthermore, there is clearly defined department of health and safety. Mines have a clear reporting structure for incidence. In safety issues there is no respect of persons, hence safety knows know difference is status. Mines have a concept of a" brother's keeper", which entails that everyone is responsible to remind, caution, restrain a peer on safety issues. Furthermore, the whole mine will have a bonus cut if there is a safety breach at the time. In addition, whose action or lack of action is responsible for security breach is either fined, reprimanded or even dismissed.

From the above, strategies employed by mines it can be seen the following key points. Education is critical in promoting safety awareness, a clear reporting structure and making it clear to everyone that they are their "brother's keeper". Safety responsibility lies in each member, who is also responsible for the safety other members. The next stage will to see if these strategies are indeed applicable to a class room situation. This led to the next cycle to qualitatively test the results in a real class environment.

Cycle 2: Activity 1

After analysing the results from the results from the mining industry were safety is considered critical. The researcher went on to teach the Conventional

Class on e-safety, dealing with dealing with defining issues of e-safety, risks, and effects on victims. The lesson also included heated class discussions. A total of three students came to researcher's office expressing shock that they were unintentionally bullying and denigrating others, five students revealed that they had been victims of sexting and harassment. They were grateful for the lesson.

The next step was to set up peer educators who were chosen as point persons to those who were suffering from any e-safety challenges. There five students among the group who were chosen. There are two male and three female students. All these students had received peer education and counselling training from the university and knew how to handle sensitive information. The peer educators had access to university authorities. In the conventional class the number of posts on WhatsApp group after the lesson reduced by 60% and they were mainly school related. The students who continued to send messages considered inappropriate were reprimanded by their fellow classmates. This showed that the concept of "brother keeper" was working. There was no change in the Parallel class which was acting as a control and members did not reprimand each other for offensive and inappropriate messages.

On the other hand, the peer educators reported a total of 24 reports which were taken up with the university on sexual harassment, denigrating and cyberbullying. The increase in number of reports was directly attributed to clear reporting structure. Some student would also comment like;

> "it's very wrong because once it's on the internet it means the whole world knows what has transpired and a person's right to privacy would have been infringed and it's against the law".

Cycle 2: Activity 2

The lesson that had been given to the Conventional class was also delivered to the Parallel class and immediately the same structure of a reporting structure was made. The results were surprisingly the same as there was a massive 70% drop in WhatsApp messages and more education related material. Insults and denigrating messages were reduced. It also interesting that the respondents would now restrain and rebuke each other to stop denigrating or bullying others. One such comments were discouraging colleagues from denigrating people from Masvingo. The other comment was given by after presenting the lesson to the parallel class was;

> "my suggestion is that something has to be done to counter online bullying through awareness campaigns be at school or wherever because this has got degrading effects on the social being of person, and can even result in preventable deaths. I strongly believe that it starts with me, yu and us. thank yu for the informative lessons. I really enjoyed them they were very eye opening" R150

Reflection

Education and clear reporting structure are key to the enhancement of e-safety awareness. E-safety victims suffer in silent, hence it becomes critical to have a clear reporting structure. This is in agreement with the findings of Vanderhoven, Schellens, and Valcke (2013) who argues that victims of e-safety challenges often suffer in silence. Providing a reporting structure can indeed help victims of e-safety challenges.

Lack of awareness was the major cause of e-safety challenges. Consequently, most of respondents had suffered from at least one e- safety challenge or had caused someone to suffer from e-safety challenge. Perpetrators did not what they were doing was wrong. The interventions implemented through education helped to increase awareness of the e-safety issues helping them to seek assistance. A clear reporting structure and use of peers was quite effective to help respondents to deal with e-safety challenges. Results from the questionnaires, and netnography, it was observed that first year students had low level of awareness of e-safety issues. The university did not have proper mechanisms to intervene and support victims of e-safety challenges. A total of 83% did not understand e- safety. Through this lack of understanding students can negatively affect themselves and those whom they interact with. This viewed is supported by Gcaza et al. (2017) who argue that e-safety can affect a variety people through irresponsible use by one person. After education, there was a remarked improvement on the action of students, as they became more responsible in the use of technology. This is in line with the views of Vanderhoven, Schellens, and Valcke (2013) who argue that education is vital in promoting e-safety.

From the results after implementing in Conventional showed that education there was an improvement and more responsible use of ICT gadgets. This was also confirmed with the results from the control group which also showed improvement in the responsible use of ICT gadgets. After awareness

respondents could also be observed helping their peers through rebuke. The respondents were acting as "brother's keepers". Consequently, after awareness, the respondents managed to work together and to assist each other to be e-safe. Furthermore, after clear reporting structure were established there was also an increase of number of cases reported. This showed that a number of respondents for a long time were suffering in silence.

What really worked was the use of education to enhance the level of e- safety awareness. This is supported by the 58 % of the results by the control group after it got education. The strategies used in the mining sector to promote e-safety proved to be very useful in the promoting e- safety. These strategies included education and "brothers" keeper. Education as well as being a brother's keeper were indeed very useful in helping dealing with e-safety challenges.

CONCLUSION

The first minor research objective was to examine the current e-safety awareness as well as experiences and perceptions of first year Media and Society Studies at the Midlands State University. The results showed that initially there was low level of awareness on e-safety and its challenges. Most students appeared that they did not appreciate e-safety issues. Another minor research question, which also helped to answer the major research question was on how e-safety could be effectively achieved. This question was effectively answered by the strategy that was formulated and is illustrated in Figure 1.2. This research helped the researcher to develop more strategy to deal with e-safety challenges. This indeed helped to promote student centred learning. Furthermore, this research offered an opportunity to motivate students to deal with e-safety challenges and carry out an introspection on their own behaviour. They also become aware of the dangers that ICT pose to them as well as others. This research helped the students to be ICT responsible citizens. In view of the findings of this research, a strategy is recommended. This strategy is based on the overall reflection of the research which recommended that education is central to e-safety as perpetrators or victims may not the aware of e-safety challenges.

The suggested strategy is based on the key finding that there was lack adequate knowledge of e-safety among the university students studied.

Consequently, there is need to educate the students on e-safety issues. E-safety is a multi-disciplinary issue involving the universities, students and other relevant stakeholders this must be involved in the education process. The education processes must be done using various education methods like lectures, competitions, awareness campaigns. It is important to use a variety of methods to ensure that every student understands issues of e-safety.

The university must clearly define a policy on e-safety. It was discovered that in the research that there was no clearly defined e-safety policy known to students. The policy must be comprehensive enough to cover all forms of e-safety challenges. In the research, it was found out that after a clearly defined communication procedure was given to responds there was a dramatic increase in reported cases. Hence, this strategy calls for a variety of communication channels and contact persons on issues of e-safety. The channels may include but not limited to emails, letters, phones, personal visits and suggestion boxes. Students must be comfortable and must have trust in the reporting system if students are to report on their challenges.

If the strategy is to succeed, students must have confidence that their problems will be resolved. There must be a variety of committees with clearly defined mandates at different levels of the university depending on the severity of the e-safety challenge involved. It also important to realise that there must a committee as universities in Zimbabwe are run by committees. The committees must have power to resolve problems, recommend solutions or forwarding the complaints to higher offices in the university or to national bodies such as police.

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