Managing Professional-Ethical Negotiation for Cyber Conflict Prevention: Perspectives From Higher Institution Learners in the Pandemic Age

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ABSTRACT

This article aims to investigate the professional and ethical negotiation on managing cyber conflict prevention towards misuse and exploitation of massive social media adoption from the higher learners' perspective. The qualitative approach from forum discussion was made among sixty higher education learners with the selection criteria. The data gathered were analyzed using thematic basis and compared with the findings from literature analysis from relevant peer reviewed journals. All were investigated, analyzed, extracted, and proposed into the professional and ethical negotiation for cyber conflict prevention. The finding revealed the principal value of digital professional skills enhancement in online practice consisting of digital competence skills, digital practice adaptability and stability, and digital technical application skills. Moreover, the digital ethical responsibility in online practice consists of communication and information accuracy enhancement, digital manner adaptability and transparency, accountability and security. We propose a dynamic discussion that encompasses enhancing ethical commitment on information accuracy for cyber conflict management; considering ethical manner on digital manner adaptability for cyber conflict arrangement; strengthening professional skills on transparency and security information quality for cyber conflict arrangement; and empowering professional negotiation accountability for cyber conflict arrangement.

KEYWORDS

Cyber Conflict Prevention, Ethical Negotiation, Higher Institution Learners, Online Interaction, Professional Enhancement, User Engagement and Ethical Continuity Process

INTRODUCTION

The attempts for preventive action from the beginning stage, where the youth could have a particular attention to manage an online conflict in a proper early stage, require to re-examine the strategic ethical manner and professional skills. The advancements of emerging technology to configure the way to

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convey information, knowledge sharing and even entertainment would make a valuable insight to the contemporary life trends (Abadi et al., 2018a; Maness & Valeriano, 2016). Most of the people enjoy their time to watching television, playing records, listening to radio, reading electronic newspapers and magazines. In particular, this is undoubtedly an emergence of Social network sites (SNS) spread throughout the world across a variety of digital devices like smartphone, computer and other portable tools (Moreno et al., 2013; Abadi et al., 2018c). As a result, considering the responsibility to use the digital devices needs to get involved along with professional enactment associated with academic disciplines in the certain discourse (Aminudin et al., 2018a; Perkovichc & Levite, 2017). In particular, the transition with its dynamics is configured to enable millions of users all over the world to connect with one another to exchange ideas, opinions, and information where every day they create huge online datasets (Abadi et al., 2018b; Boeke & Broeders, 2018). It is in fact that the number of digital users is growing sharply every year with a variety of purposes. Those include sharing rich content like videos or pictures, communicating with others by chatting to other users and posting and sending text messages and comments to larger audiences via friend's lists and other settings on their favorite online networks such as Facebook, Myspace, Twitter, and Instagram.

In addition, the increased new types of use would undoubtedly create the ethical issues referring to both positive and negative effects. The positive relationship between usability of digital platform and information nurtures an attempt to seeking behavior at community level and students in particular to support their classroom work (Aminudin et al., 2018b; Anshari et al, 2017). Apart from that, both potential misuse and abuse in digital platform as the platform of media information have serious consequences. The negative impact like cyber bullying in many cases with increasing the frequency has attracted serious attention to alert the alarm amongst SNS users (Kania, 2020). In addition, the issues of ethical risks on digital users fall into the categories of inappropriate content, content quality, and questionable truth of content such as cheating, scams (Aminudin et al., 2018c; Lindsay, 2020). It should be taken into consideration to address such major ethical issues related to digital practice, such as cyberbullying, information quality, and inappropriate or questionable content. In addition to the extent of information quality assessments complemented by descriptions of the way to use, the role of user behavior is to decide the credibility of information on digital online practice. As a result, the increased digital use can lead to the higher rates of the unintended consequences mentioned above and thus ethical issues surrounding digital need to conceive an entire deal of attention.

There are many works conducted in terms of ethical concern with a variety of approaches. Those are etiquette and netiquette (Kozík and Slivová, 2014) where both have been considered as behavioral guidelines for online networks. In particular, it covers both common behavior and proper manners for online users (Abadi et al., 2018d; Fasana, 2018). It also represents professional and social etiquette to be used for cyber conflict prevention, which requires Internet users to be courteous and precise in their social network interactions. However, this approach needs to be developed further to identify practical ways in which users are to arrange and manage digital practice to achieve their benefits by proposing the conceptual guidelines understood easily by the users (Karatzogianni, Miazhevich & Denisova, 2017).

Therefore, further exploration aims to develop models for resolving ethical issues with the professional negotiation in cyber conflict prevention. It is necessary to point out the concrete empowerment, which is urgent to be transmitted into digital features and usage patterns. In order to make a significant contribution to the society, the present article is an attempt to fill the gap on ethics and values for digital users with aiming to explore adaptive skills associated with ethical norms. Moreover, this study will demonstrate how the users should engage into digital interaction critically exploring ethical engagement of users in promoting personal and social awareness as the main foundation. This article aims to investigate the professional and ethical negotiation for cyber conflict prevention towards misuse and exploitation of massive social media adoption from the higher learners' perspective as addressed in the figure 1. Paying particular attention constructively into digital

Figure 1. Framework of study



practice would undoubtedly contribute to individual and social awareness on information adoption with considering particular attention to moral codes and ethical standards.

LITERATURE REVIEW

Towards Cyber Conflict

Cyber conflict has been defined as the computational use of attacking against the certain state, where the causing could make a significant harmful impact on the extent of physical warfare with a vital computer disruption (Perkovich & Levite, 2017). As the computational technologies use with the cyberspace, the destructive orientation with its malevolent purposes could give a substantial impact towards the organization platform such as military and diplomatic interactions formed in the context of foreign policy tool. The strategic system with its causing systems on leading to the cyber conflict is made through the computational means transmitted into the microprocessors and other associated technologies (Abadi et al., 2018e; Maness & Valeriano, 2016). In particular, the cyberspace existence with the purpose of destructive orientation, malevolent, would lead to give an impact towards affecting the shift paradigm of the diplomatic relation together with military occurrence (Valeriano & Maness, 2015).

With such interactions towards the number of entities, the existence of cyber conflict with being inherently social would enable the soldiers train and operate in units, fighting and dying for each other as much as for their countries. The crucial essence of cyber conflict could not only happen with its social impact but also through traditional warriors in working and socializing using the physical settings (Huda, 2019; Lindsay, 2020). The existence of cyber warriors cold be operated in relating to the virtual space where the communication with an electronic basis is arranged in online basis. The extent of coordinating the operational system could be distributed through the software tools adaption with the knowledge acquisition required to respond such attack (Kania, 2020). Using electronic networks, computers, and data, their targets come from the emergence of cyber conflict with an initial potentials leading to hacking for political and social objectives.

In addition, the cyber conflict could be appeared with expanding its manifestation in cyberspace with the digital computers and its networks against its data emerged in perpetrating more for money and revenge than as an instrument of national and international conflict (Anggraeni et al., 2018; Fasana, 2018). The various extents clearly viewed into the typical crimes such as the embezzlement, bank fraud, unauthorized use, information theft and vandalism. The multi-emergence of hacking attempts come from the teenage arrival for being enjoyed with the scene to pursue the existence of exploring the digital networks for making fun and earning bragging rights. In particular, the single attack come with the Internet-used computer worm as the result of experiment (Maness & Valeriano, 2018).

Figure 2. Towards cyber conflict



The emerging rise of such mix playful hacking leading to the serious problem of cybercrime, this cyber conflict could be happening for the orientation purpose for hacking with social and political objectives. The substantial share of making cyber-attacks emerged with taking into consideration together with the high profile on criminal attacks on the Internet could be obviously viewed into perpetrating the certain nations in line with the cyber-attack phenomenon (Whyte, 2020). In this view, the extent of hackers, outset and cyber criminals in operating in groups together with examining an early computer- criminal attempt the collusion cases involved in groups amongst the youthful hackers (Mitchell & Pytlak, 2020). The extent of serious criminals were formed into sustaining the digital networks in leading to make the strategic traffic in booty and tools of cybercrime, for example credit cards expose. At this point of view, there has been the outstanding number of social networks being actively engaged in the criminal attempts with the cyber-attacks. The form of such these networks could be deliberated into making fun, while the most attempts are oriented to explore the financial gain, apart from the rise number for the engagement purpose in cyber conflict.

In line with the initial signal for the individuals to be involved with the hacker groups through linking into the social networks, the main concern to do with such involvement would lead to came across hacking through causing the internet networks support. Moreover, being wider context of causing the variety of impacts like animal and human rights with the globalization shift paradigm could bring the certain condition amongst the state politics together with its international affairs (Brown, 2020). Both nature and origin of such networks could come from the existence of having the details about targets, orientation, use and tactics of engaging the online forums, which impacts to the relationship between agencies and governments. In terms of the nature of digital networks in working with the cyber soldiers, the typical operation was employed with the flow of expanding the rigid hierarchies imposed through constraints of wide ranging of control and command. As such, the occurrence of this phenomenon could lead to the formal doctrine in following the rules together with the procedures (Egloff, 2020; Huda & Teh, 2018). The operating system to sustainably encourage the loosely-connected networks could be facilitated with an independent practice in supporting the substantial purpose.

The main concern of characterizing the leaderless resistance could represent the outstanding project in dealing with the strategic view of international cyber conflict (Boeke & Broeders, 2018). In the international relations lens, the impactful phenomena as the main arena of dealing with the cyber conflict among the nations or even states in directing the forward policy against the certain states in the realm of foreign relations would enable in commending the nature of cybercrime together with the international interactions nature amongst the affiliations involved in such phenomena (Huda et al., 2017a; Karatzogianni, Miazhevich & Denisova, 2017). It is important to note that the multi dimensions from source, history and method in order to analyze the cybercrime occurrence leading

Challenges of cyber conflict in digital revolution industry age	Virtual information trust
	Virtual world tendency
	Computer and internet access
	Digital negative interaction
	Digital technologies misuse
	Cyber attack tendency
	Cyber defence against
	Computer systems, networks, and infrastructure attacks

Figure 3	Challenges	of cyber	conflict in	digital	revolution	industry	ade
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directly to the nature of cyber conflict between international competitors (Work, 2020). The clear view of cyber war with associating its descriptive and overwrought as the strategic process in pointing out the continuous challenges would enable enhance the development phase of cyberspace as the tactic with the form of complete warfare (Hughes & Shaffer, 2020). As the tool in the arsenal of diplomacy and international interactions, the clear forms of threating the toolbox of a state's arsenal of power as initiated for being the popular tool by the number of organization member such as policymakers, politicians and defense contractors in the contemporary discourse.

Challenges of Cyber Conflict in Digital Revolution Industry Age

Since the virtual information can come across the worldwide region, the virtual world is dominated with generating the platform of processing the transmission process through the digital devices. The extent of information in digital interactive pattern could be constructed into the worldwide communication in order to connect with each other (Maness & Valeriano, 2018; Maseleno et al., 2018a). Such attainment could be delivered in interacting with sending message and photos to transmit in the virtual interaction platform such as Facebook, Twitter, Whatsapp and Telegram (Mitchell & Pytlak, 2020). It can be achieved to access easily in using machine-readable format. The users can manage electronic digital devices such as web pages or websites to transmit electronic message. With its distinct features in sharing information and ideas in virtual world, this initiative points out to generating particular interest into the form in expression through the wide arrangements in the new featured models. The innovative device configured into the style on touch screen aims to develop the way to transmit information more easily (Brown, 2020). In order to making easy for the users to transmit such information to others, it is the way which considers transforming information by facilitating an innovative device.

Integrated into the extent of the model pattern which is contrasting to the traditional style like printed version, information media including magazines or newspapers may also be supported with the number of digital media forms (Huda et al., 2019b; Maseleno et al., 2018b). As a result, it is necessary to create the extent of interaction skills together with the outstanding value of digital media on society combined with technological developments of SNS such as Instagram, Facebook, LinkedIn, twitter and others (Egloff, 2020). The nuance refers to the process of transmitting information in the digital era configured to the intellectual assets in enduring value to connect the users by rethinking the paradigm with a new approach and perspective (Work, 2020). It is important to consider in particular with the action stage in the way to manage information pattern represented by the current situation. All these refer to the competitive achievement widely organized to the objects of the virtual world to create the way to interact with others especially in cyberspace (Hughes & Shaffer, 2020). In short, an open content movement is widely seen as the activity to conduct in the virtual world.

With regard to the information quality, transferring information to other users in the virtual world needs to capturing process which explores knowledge patterns in the models which can be transmitted in the actual performance. As a key role to transfer information in the way to access verbal pattern, it could be more easily transmitted online (Whyte, 2020). It indicates that this pattern refers to actually performing the knowledge acquisition by addressing the reliability of fitting the content in digital practice. The outstanding potential concern to communicate with others is necessary to consider the context-specific value to transform data represented to knowledge with the ability which would lead to combining such types of information (Huda et al., 2017b; Oshua et al., 2020). To give the guidance on the communication pattern in SNS, attempts to consistently addressing the moral engagement should be articulated in guiding the processes by providing the perceived value of information pattern. As a result to adjusting the way to focusing on individual and social concern, this initiative suitably in applying the right path of knowledge needs to be given more attention with a significant, wide-ranging and complex impact on society and culture (Akatyev & James, 2017; Maseleno et al., 2018c). The media information processes explicitly driven by the digital transition is required to keep accessible information systems in digital online to become prominent parts of users everyday life. With regard to referring to such developed devices which can be used, engaging in digital interaction by addressing critical thinking of positive and negative aspects needs to keep in mind as an effort to encourage potential value with the essential component of feeling in discovering digital information's benefits and demerits.

Professional Enhancement in Digital Interaction

Regarded as the standards through possessing the training prepared with the particular knowledge and skills, attempts to conducting the necessary point of view to perform specific role within the professional engagement can be integrated into the development of technology to enable the users to operationalize their engagement on life performance. It needs to put forward in expanding connectivity in the way that relies on the rise of computing style. In addition to the learning process, the adoption of hands-on classroom technologies developments with personalized learning software provides students with new and exciting learning opportunities (Cornish, 2017; Huda et al., 2017c). Moreover, making new innovations in providing real-time insights into the student's performance can empower the collaborative approach with their workloads. The professional adoption taken in the training program is integrated to the technology which is prepared to the lesson in the classroom in the way which is associated with techno ethical inquiry from technological systems to society (Kello, 2018; Pardimin et al., 2018). Through possessing the technology skills, feeling adequately prepared to integrate technology within the learning process should be engaged into the technical training on the features of applications with their diverse functions (Madenyika & Tower, 2021). As a result of professional development in addressing to using technology, the style of programming is often positioned to prioritize the basic training which can be described to explain its implications for learning in driving the educational technology.

In line with exposing the creative way considered to be the professional adoption towards the technological tool, the role of strategic planning has a significant role to run engaged into educational technology which may be implemented in the school program and society concern. It means that such course redesign which takes a strong leader that is willing to challenge in doing difficulties enables the users to assess what is needed as attempt to pay attention in creating the vision by communicating with the team of experts (Huda et al., 2017d; Ukwueze & Island, 2016). With this regard, the vision is needed to build the way of implementation skills through practices and methods. As a result, the resources which are significant to underlie the model framework address the dimensions of technology integration and course redesign. In terms of considering the integration among the dimensions about the professional adoption, the pattern which needs to invest in integrating the technological tool into the course covered in the model is time commitment (Junaidi, Susanto & Rusdi, 2020; Ristiani et al., 2018). The level of its current existence among such approaches lies at the core model which underlies





organizational initiatives in providing the motivational basis. It refers to the personal values and goals where the causal relationship between time commitment and competence has a particular essence to the identification to focus on skill development. The skill set out in integrating technology may enhance the pedagogically sound way to signify the quality course design and expertise within the society (Huda et al., 2018a; Papathanasaki et al., 2020). In using the instructional design model as a guide to serve as a frame of reference, the professional competence can lead to redesign the variety of instructions which can support to underlie the multi-media experts.

The way to enhance professional adoption in accessing the lesson plans by absorbing information to cover such options including online learning programs and other demand resources such as training videos could enable the teachers to get offer continual professional development (Huda et al., 2018b; Gill, 2020). It refers to attainable benchmark for the teaching staff to ensure that stakeholders could gauge their needs in terms of the approach and reasoning assumption about the technology deployments. Considering stand-alone programs as offered to simply have the same impact with professional development and training opportunities can be taken to offer the administrators of schools set aside time during the strategic planning. Improving the sustainability about school initiative on the technological integration into the curriculum design puts the focus on accomplishment of the pedagogical methods which can drive the students' learning (Susilowati et al., 2018a; Whyte, 2020). The considerable feedback of the mechanism among the teaching effectiveness, better learning outcomes, and increased satisfaction is considered potentially to improve grassroots acceptance throughout the process to ensure the sustainability of schools' curriculum and technology initiatives (Galende et al., 2020; Sivaram et al., 2020). The critical approach towards the availability of support for instructors relies upon the motivation which the educators can reflect to encourage the instructors in getting student feedback by considering newly implemented teaching strategies. The process employed through pedagogical methods has to do with the educational technology tool where teaching and learning experience integrated with trustworthy infrastructure in supporting the experience synergizes trustworthy infrastructure.

Ethical Manner Principles for Online Activities

In terms of the ethical engagement which underlies digital interaction, ethical norms would be significant enhancement attempting to achieve the good life with contributing the standard of the adoption-derived information. It refers specifically to personal and social orientation useful in the moral principle. Empowering the way with adaptive technology skills in order to have careful engagement in the digital information age determined solely by its usefulness, this ethical norm becomes important in guiding to the right path by evaluating and applying digital information (Akoto, 2021; Huda et al., 2018c). As a result, digital practice can be used to transmit information by consistently following

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Figure 5. Ethical manner principles for online activities

Ethical manner principles for online activities

- Ethical engagement
- Considered in both individual and societal level
- Digital interaction
- With moral principle
- Digital media platform

ethical considerations in both individual and societal level. The normal human interactions from face to face or live and direct way can be accomplished through digital information technology. Since information sharing can make life easier, for example by allowing us to build relationships with one another, create business contacts, or get news updates, carelessness in information sharing on the other hand can cause confusion and even conflict if users spread information which is not true. It is not uncommon for hostility arises among groups as a result of misinformation (Gill, 2020). In addition, when there is no way for users to discriminate among news, fact, prejudgment, and gossip there can be dangerous consequences (Tran Dai & Gomez, 2018). With the digital adoption, these ideas are relevant to both face-to-face interactions and online one. Consequently, possessing good ethical foundation disseminates information in presenting the particular challenge. In short, an ultimate goal of the digital interaction platform necessitates the attainment of the social good acquisition with cautious consideration for ethical engagement.

As a result, many of the ethical issues arising from digital media platform, such as Facebook, Twitter, or LinkedIn, must be addressed on the basis of a profound understanding of privacy and information attribution. Additionally, the wide range of digital use may have ethical, professional, and social implications related to information credibility and quality (Huda et al., 2017e; van der Meer & Aspidi, 2017). Since, digital practice platform has recently grown very popular with online users as a tool to extend their social networks exponentially by overcoming temporal and geographic barriers, these digital interactions raise ethical issues related to the moral values embedded in online interactions. The ethical perspective on digital practice is widely engaged into the community with the need to take more care through the strategic interactions than with normal physical interactions (guyen & Nof, 2019; Susilowati et al., 2018b). In addition, an ethical impact assessment framework could be used by those developing new technologies, services, projects, policies, or programs. There is a need for such an assessment of new and emerging technologies because technologies are not inherently neutral or value free. Moreover, the field of ethics is concerned with moral engagement to recommend that users exhibit general good manners in online activities such as communication, information sharing, and even business interactions. Moreover, the specific engagement refers to the behavioural attitude in delivering the therapy service using mobile application design (Borghard & Lonergan, 2018; Wulandari et al., 2018). The specific rules may diverge depending on the digital practice used and the user's background. In particular, the initiative in encouraging the ethical norms designed with application guideline includes illustrating how users should do in terms of digital interaction with technological tools.

Regarding the existence of ethical guideline rules and their application in communication, the users' opinions differ on the question of the importance of observing ethical principles in digital media use (Robinson et al., 2018). With this regard, both etiquette and netiquette have a significant

Figure 6. Research design



role to guide the users on digital interaction in an appropriate way. The application of netiquette in communication may potentially engage into the users widely diverse in their cultural consciousness, age, and ability to express themselves with various communication technologies to transform the different etiquettes (Robinson et al., 2019). Overall, netiquette is commonly enforced by fellow users, such that most individuals take care to avoid infractions of social network rules. The wide range of digital interactions can be challenging because they attempt to accomplish through technologies with the same goals that would previously have been accomplished through face-to-face contact (Al-Mohannadi et al., 2018). Disseminating information presents a particular challenge, necessitating a good ethical foundation. Information sharing can make life easier, for example by allowing us to build relationships with one another, create business contacts, or get news updates. However, carelessness in information sharing can cause confusion and even conflict if users spread information which is not true. Not infrequently, hostility arises among groups as a result of information (Steingartner, Galinec & Kozina, 2021). In addition, there can be dangerous consequences when there is no way for users to discriminate among news, fact, prejudgment, and gossip. These ideas are relevant to both face-to-face interactions and virtual interactions.

METHODOLOGY

Research Design

With a focus on qualitative research methods, this study collected data from 120 higher education students through open forum discussions. To enable gathering the depth of information and related data, this qualitative technique was chosen based on selection criteria (Mills, Bonner & Francis, 2006). In accordance with the procedural research commitment methods, this is to guarantee the thorough and precise study findings (Creswell, 2009). According to Merriam and Tisdell (2015), this study falls within the qualitative research technique category of case studies. The specific emphasis refers to demonstrating ethical and professional bargaining in a digital setting in order to address potential obstacles to the prevention of cybercrimes. The information below comes from students at higher education institutions that are studying pedagogy in the era of pandemics.

The decision to use a qualitative method stemmed from the need to collect more precise and indepth information. The open debate approach was developed using the virtual mode of the epidemic era as a basis. According to this perspective, the identical questions were posed to each student, who was asked to respond based on their actual experiences with the movement control order in the epidemic era. To ensure that everyone could be easily recognized, all of the answers were uploaded into the platform system. Because all of the responses are based on personal experience, each respondent is kept anonymous for privacy reasons. Following the acquisition of the data, the thematic foundation was used to construct the coding.

The current aim of the study points out investigating the indicators of having professional skills and moral manners in underlying the digital online activities including the various forms of life. These include social interaction, education process and practices and also other purposes of human life for wellness. The attempts on obtaining the access of digital online are strategically enhanced with providing the detailed point the digital adaptability to build the future trend for human instruction in underlying their life services.

Participants Selection

One hundred twenty higher learners participated in the method for selecting criteria, with the participants choosing the criteria based on this foundation. The anonymous participant who received the code was thus required to guarantee their privacy in order to participate in the study and to explicitly display their own, distinct input from the forum debate. The methodology used to choose the subjects for the research study was found to be purposive sampling. The major goal of this strategy is to provide insights into research practices so that fieldwork may be conducted more accurately and with a commitment to protocol and etiquette. The respondents who are to be included in the study must have qualifying indicators as the rationale for the criterion in order to meet the standards as stated in the purposive sampling procedure. The respondents' distinctiveness in reflecting the population recognized as the samples of chosen participants may be obtained via this approach. The primary goal in a qualitative scenario is not to maximize the number of participants, but rather to draw attention to the unique qualities of each one in order to provide a more comprehensive understanding of the topic under discussion. Given that the sample size for this study meets the inclusion requirements, the following distinguishing characteristics of participants should be taken into account:

- 1) Throughout the epidemic, the students' interactions and learning have been influenced by the digital environment.
- 2) As part of their academic foundation, the students have been actively engaging in digital practice.
- The students have been exposed to a digital practice environment that is integrated into their practically everyday lives.
- 4) The students must have a position where they may actively engage in substantial practice with digital engagement.

In this context, the deliberate efforts to create a distinctive description that involves the participants are intended to provide a critical understanding based on their experiences, convictions, and behaviors (Richards & Morse, 2012). The collected empirical data underwent a critical examination and extraction process using a theme analysis, which allowed the core idea of professional and ethical negotiation for the prevention of cyber conflict to be put forth. In this perspective, the procedure of assigning a code—for instance, the first male participant formed as 'MP1' or the first female participant created as 'FP1'—is crucial in uniquely identifying each participant and ensuring the respondent's anonymity.

Data Collection Process

The phase of establishing the selection criteria as the foundation for justification before doing the study is where the data gathering procedure starts. In this sense, the strategic selection is completed before the forum debate is held. Ensuring impartiality is crucial while gathering data. In order to make sure that the study met the recommended standards—that is, that adequate detail could be obtained—this certification process was necessary. Attempts to review the phrasing and order of the questions throughout this procedure may make it possible to plan the forum discussion. Hence, the goal of data collection is to provide insights into improving the dependability and credibility of research data (Guest, Namey & Mitchell, 2012). Data collection involves performing effectively. Setting the date, time, and location of the forum discussion session allowed all of the chosen participants to participate and provide their valuable insights and points of view. In order to meet the requirements

Figure 7. Participants' selection criteria



Figure 8. Data collection process



Figure 9. Data analysis process



of qualitative research, the study's methodology involves organizing a participant's story scenario and providing a natural direction.

The stated respondents for this study may be contacted to allow for free expression of their opinions based on their behaviors, beliefs, and perspectives on the topics during the research data gathering procedure. To get a perception of behavioral keys and aspects towards the scenario of physical basis to virtual approach based on their comprehension of knowledge, instruments that represent the study's aims and objectives have been produced. Getting specifics about the emotions, perceptions, and behavioral patterns that study participants represent is the main goal of the current aims. Additionally, in order to provide respondents the flexibility to concentrate on achieving the study goals on ethical and professional participation in the digital sphere for the avoidance of cyber conflict, it may be helpful to address the essential tools shared with them.

Data Analysis

By organizing the qualitative analysis and referring to the actions that must be taken to guarantee that the process is carried out with the correct flow, the data analysis was created. In this investigation, the transcribing procedure was undertaken first, and then the consent of all research participants who were included was sought. Being actively involved in the forum discussion process allowed for the conduct of the thematic analysis scenario. In order to prevent cyber conflicts, the primary focus of this conversation is on connected issues related to the ethical balance and digital professionalism. The many data gathering methods are then put through a streamlined procedure that connects the field data to the final report. This analysis method was specifically used by performing the filtered data only referring to the relevant topic discussion that needed to be included for the theme pattern construction.

After gaining a knowledge of the significance and context of the study, this data analysis procedure is then carried out to identify and create the sub-theme (Creswell & Creswell, 2017). In order to provide categories and analytical ideas for the data analysis process, the strategic phase of the present study was also tackled in the design, restructuring, and comprehension of the data. The chosen method of theme analysis is important because it provides a useful perspective on how to communicate the essential elements of improving digital professional abilities for online conflict avoidance and management.

Procedure of Theme Categorization

The specific topics were developed based on a study that will determine the path of growth. The knowledge of digital competency, the skills of digital practice, efforts at digital adaptation, and the

Figure 10. Procedure of Theme Categorization



technical stability and application of digital technology might all be used to generate the many themes. The method of elaboration may involve using a theme analysis with sixty advanced students. The broader interpretation is predicated on the diversity of backgrounds and the study of data extraction from the subjects. The established pattern of topics was created by understanding the forum discussions in order to conduct a thematic analysis. In order to create the coding process, it was necessary to categorize the construction process in order to bring the point of research process, procedure, and practices along with the orientation of developing the theme direction The selection criteria that were used to integrate the themes into the strategy process and practices had a specific value that was determined by the 120 participants in the forum discussion. In order to extract the intended themes from the category based on the viewpoints, opinions, and expressions of the respondents, they were involved in the featured criteria belonging.

Based on how frequently participants made explicit statements and took notes throughout the forum conversation, themes were created and categorized. Figure 11 below provides an excellent illustration of this. By taking into account over half of all the persons participated, the constructed themes were produced from any identification. The created themes category was examined by analyzing how each participant's comment throughout the forum debate was allocated to the theme's construction. More participants in the debate are being considered in order to increase the number of potential subjects that can be discussed.

RESULTS AND DISCUSSION

Digital Professional Skills Enhancement in Online Practice

Getting improved into the professional development can be dedicated to helping teachers effectively incorporate technology into their appointment process. The technology-focused professional development associated with pedagogical framework is necessary to construct the meaningful trait





of effective technology programs. As a result, understanding the practical skills with accepting rules which may be prepared in motivating vision of technology-aided teaching and learning starts with the training program where the schools take initiative to provide lesson plans and materials (Akatyev & James, 2017; Anshari et al., 2017). Giving the teachers a clear picture of how technology implementation might look has the core foundation for their learning goals agenda which may be provided for the following year.

The latest model of peer-to-peer interaction has been emerged among the majority of teachers in trying to introduce the technologies from any kind of fields including the classroom, business, and others. One of the characteristics is comfortable way where this can be engaged with handling computers in helping the students' learning. Working in computer, the importance is getting information source to support their task by choosing and accessing the learning material with numerous insights for adding the assignments in creative ways.

Digital Competence Skills

The initial element to expand the digital professional skills refers to the digital competence skills, as stated by one of the students, '*in my opinion, the mastery of digital skills in this rapidly developing era is very important to be mastered by all parties, especially to students and also to educators*' (FP2). Not only have they had concern towards the digital professional skills strategized into sustaining the digital practice in responding the cyber conflict, but also digital engagement with the technology integration should be obtained for an effective medium on information dissemination. This as stated by one of the participants:

'As we know together that the development of education also cannot escape both emphasis and dependence on information technology, especially the internet, computers and mobile devices. Many benefits of the use of technology can be obtained such as being a faster and more effective medium for disseminating information, obtaining the facts of teaching materials, having discussions with students, presenting papers and the like' (FP3).

The required development of digital competence skills could be emphasized through having a sufficient technology enhancement. The wider skills of instrumental coexistence to use the digital tools and media requires the sufficient knowledge with the principles to achieve the competence skills (Akoto, 2021). The strategic attitude to comply with the strategic use could be deployed into sustaining the openness commitment together with the critical understanding. Not only that of considering the

creative thinking skills, but also the wider accountability with the extent of independence for being confident towards the critical electronic media use. Such this attainment is to obtain the strategic phase of working to have a sufficient communication pathway with having the competencies of both logical and critical thinking (Alatalu, 2020). The high-level of skills in managing the information associated with the well-developed communication skills could be enhanced in contributing to the digital stability in adapting the cyber-conflict arrangement.

Digital Practice Adaptability and Stability

The adaptability of digital practice with having the stability concern is significant to expand the strategic awareness on responding the cyber conflict, as noted by one of the participants. Digital content could give insights into the people's decision making followed with the activities. The way of understanding the digital practice is crucial in enabling the people to advance their consistency to use such resource (Ali & Hong, 2018; Huda et al., 2017e). The digital platform in enabling the reader to have a sufficient comprehension with the responsible awareness to assess the value and reliability of information. This is clearly stated by one of the participants:

'In this modern age, mastery of digital skills in the process of online practices is very important. This is because, these digital technical skills are used as a platform for students to undergo their online process in the virtual world due to the whole world being hit by the Covid-19 epidemic that has spread until now' (FP4).

Through online practice communities, employees and professionals have been given a new and effective means of getting help with tasks and developing knowledge with other professionals around the world (Al-Mohannadi et al., 2018). Such digital practice here could be viewed clearly in having the proper technical skills on digital competence to ensure the flow of process with a sufficient consistency. This is as stated by one participant:

'The online activity process requires good digital technical skills especially in ensuring that process can run smoothly. In my opinion, a teacher needs to master the techniques in handling gadgets in more depth' (FP5).

Developing common sense and judgement skills is able to enhance the good analytical skills. It refers to the advantage to physically present in the classroom, for instance that distance learning and online education have become an integral part of the education system nowadays. Certainly, the value of off-campus education can be of great advantage equally to that of on-campus training when the number of student is increasing which can be done away from the campus through the online courses (Anshari et al., 2017; Huda et al., 2017f). In achieving this attainment, getting a clear understand should do with having the partnership of educational programs in the schools in order to commit with their critical skills with the responsible adoption and adaptation. The essence of professional networks with the knowledge sufficiency could be enhanced in developing the exchange initiative in providing the users' informal learning to become their strategic personal activities.

Digital Technical Application Skills

One of the important aspects in responding the proper way towards the cyber-conflict is to possess the digital technical application skills. As result, going beyond computers and internet is now more significantly efficient than printed version of notebooks. The professional way which teachers can perform is that they can coach their students to complete their assignment and research projects by assessing the plethora of information available on the internet (Azvine & Jones, 2019). By referring to a large number of resources, this advantage can be utilised professionally in the way that getting





exposed to the numerous ideas for their assignments and the creative ways to finish enables students to enhance their excellent abilities. This is as stated by one of participants' statement in the following:

'Digital skills in such applications are very significant because the application is an application that is often used by lecturers during online classes. In addition, skills in using Microsoft, video editing, slides are also very important in learning. Therefore, students need to have sufficient knowledge in digital skills so that it is easy for us to do something that involves digital' (FP6).

The strategic model of elaborating the digital competence could be developed into having the sufficient practice with reducing the extent of complexity. The overall phase comes to advance the accuracy in gaining the better arrangement with an easier comprehension towards the certain field. The strategic purpose to have a strategic map on digital competence refers to point out a sufficient information ability (Boeke & Broeders, 2018). Such this attainment points out identifying the certain location in retrieving the information and then getting the storage in organizing and analyzing digital information. Moreover, the elaboration could be developed in evaluating the purpose and relevance of the ability to the communication pathway in collaborating and interacting with participating the digital teamwork partnership (Borghard & Lonergan, 2018). The virtual networks in making the appropriate media with the use of behavior and tone in producing the ability to configure, create and edit the digital message with the content compliment. In solving the wider context of digital problems, the strategic pathway of exploring the way in taking an advantage of technology enhancement.

Digital Ethical Responsibility in Online Practice

In the extent of considering the potencies transformed in the way to underlie the interaction process in digital practice, being aware of chance and challenges should be associated with the moral engagement in creative and wise way. Accessing information online is necessary to enhance the ability to adopting digital tool in the appropriate way. With regard to getting process in transforming and transmitting information, it is required to prepare in adapting moral principles integrated with professional skill to drive the process in getting feedback on digital practice (Broeders, Cristiano & Weggemans, 2021). Towards the way with ethical engagement, the initiative of reaching information in digital platform should be associated with being aware of the impact and benefit. As a result, it would be good opportunities to prepare the users to access information needed for supporting their inquiry in a wise approach. When used in a safe environment with the immersion of digital practice, information pattern usually accessed in the virtual reality should be directed at developing social skills in the way to use digital technology wisely.

Communication and Information Accuracy Enhancement

With the commitment to have a sufficient communication pathway, one of the strategic elements on bringing the digital ethical responsibility in online practice could start with an effective engaged communication ability. It indicates the adaptability to have a sufficient accuracy by listening actively to give a substantial comprehension in surrounding. Through clearly expressing around the circumstance, the role of communication accuracy skills should do with advancing the technique in making a better communication pathway (Brown, 2020). The initial requirement comes from an effective communication pathway with the sufficient accuracy in underlying the diverse skillset. Both verbal and nonverbal pathway of communication is potentially contributing into possessing the listening strategy with an effective skills of communication. This is clearly stated by one participant:

'As known together now, students need to communicate well and pay full attention during the digital activity session. This is because, communication is an important thing in smoothing the learning that is carried out' (FP2).

With this regard, the continuous process in allowing users to give an expression in improving the personal abilities with professional relationships is required to have a sufficient knowledge advancement. In comprehending the strategic way to listen well to have the communication pathway in clear detail, it is necessary to assist the expression commitment in underlying the users' social life performance. As this is important to ensure the users' social life concern in a good place, the communication pathway is required to have clear detail with a concise quality (Grigoriadis et al., 2021). Through expanding the concrete value in giving the correct message, the coherent basis with a complete form in ensuring the courteous consistency should be looking at reaching the communication pathway. The sufficient illustration of possessing the particular element in leading to do the goodness with keeping away from the terrible consequence requires to formulate the way of proper response.

Digital Manner Adaptability

In order to preventing the addictive behaviour which might happen, an exposure to the negative side especially in protecting the users by immersing the supervision, guidance and advice can be conducted by promoting the wise approach to encourage them in discovering information. Attempts to creating awareness of the issues on digital activities in both good and bad content would constitute an integral part of the cultural and daily livelihoods with potential value proposed herein for the greater good of the society (Madenyika & Tower, 2021). Thus, the need to see both sides should be considered to provide ethical supportive structure in the conceptual framework, as this is stated by one participant:

'In my opinion, the ethics in the online activities are varied with many meaning like character, personality and customs' (FP3).

Ask for clarification to avoid misunderstandings. At that moment, the person speaking to you should be the most important person in your life. Another important point is to have one conversation at a time. This means that if you are speaking to someone on the phone, do not respond to an email, or send a text at the same time. The other person will know that she doesn't have your undivided attention. Make sure that you appear accessible, so have open body language.

'In my view, ethics is an important thing and should be practiced by every individual especially to students. There are several ethics that need to be applied by students in their online activity process' (FP4).

The indication of paying particular attention on bridging the online manners requires to keep the eye contact in maintaining the ethical manners. By providing the specific detail on knowing the brief description with an enough information, understanding the pathway of having the attempts to respond properly in ensuring the capacity to have the digital practice (Romaniuk & Manjikian, 2021). It is necessary to maintain learning in giving the way with the positive behavior through communicating an effective approach. The ethical manners with the strategic skills are arranged in following the phase of enabling to provide the sufficient communication skills.

Transparency, Accountability and Security

The safety concern is the main orientation through enabling the ability to comprehend the use of digital technology in a safe circumstance. The sustainability concern in digital technical application could be linked into sustaining to pay attention the data identity together with working into the legal rights, consequences and duties (Singh & Mahajan, 2021). This is clearly as stated by one participant:

'In my opinion, the ethic in this online activities is that students need to open the camera during the online practice session. This is to ensure that students are with the teacher during digital practice. In addition, students also need to open the microphone when asked by the teacher to speak to ensure that there is a two -way learning response between teacher and student' (FP5).

With having the sufficient operation in such easy way in seeing others, the attempts to have a look at a whole context of digital practice to be taken in performing the transparency would imply with openness. The basic consistency of accountability in communication pathway should be practiced in continuing the transparency in the societal concern such as organizations, companies and administrations within the communities (Straub, 2021). Addressing the transparency with a sufficient meaning on information security requires the continuous ability to have a brief description of security mechanisms. In line with managing the condition with an open circumstance in digital practice, the strategic enhancement of gaining the heightened trust level is supposed to build the goal orientation of better relationships (Zegzhda et al., 2020).

Practical Implication for Cyber Conflict' Proper Response

The technological convergence should have ethical and professional basis to concern about social implications related to information credibility and quality. Otherwise, it will lead to the implications illustrating the potential and power of technology adoption for instance the mobile Internet from e-commerce to m-commerce. As a tool to extend the social networks with online users exponentially in the attempts to overcome temporal and geographic barriers, these digital interactions raise ethical issues related to the moral values embedded in users' interactions (Al-Mohannadi et al., 2018). The ethical perspective to take more care within technology interactions has to do entirely with moral impact assessment framework as normal physical interactions. Attempts to the assessment which can be exerted for the policies, services and programs are necessary to give insights on how to use technology tool appropriately, since technology is depending on the users to utilize or make harm. There are some values which can be applied in the technology use involving equality, justice, property, and privacy to the goodness of society where the values can coincide with or correlate positively or negatively with social impacts of technology (Steingartner et al., 2021). It refers to the attempts to the technological use which demonstrates an awareness of how information technology has shaped



Figure 13. Practical Implication for Cyber Conflict' Proper Response

our social and epistemic practices with our moral experiences, such as instance friendship, care, commitment, and trust.

To be more involved in working together with a good relationship, an effective communication in allowing to feel more comfortable requires a strategic opinion for questions inquire. Such this attainment would yield a valuable significance in giving an input to respond the problem to solve in a proper way (Zegzhda et al., 2020). The continuous clarity in underlying the work process would lead to the healthy relationships in managing the trust commitment. As such, the management on building trust with the loyalty in resulting in a heightened productivity level would make a feeling to be more comfortable in the digital practice session. The accountability would be more engaged in building transparency and thus would lead to security concern, since the valuable consequence in highlighting the importance of fostering the better understanding of each role to play (Singh & Mahajan, 2021). The security itself played what their role can give insightful value in contributing to play a part to achieve the goal orientation.

With regard to the standards in addressing the ethical norms concerned to privacy, credibility, and respect for other users in the context of technology, technology-derived information can be useful in terms of personal and social orientation. In so far as information is important to the attainment of a good life, technological use may have chance to contribute to this goal. Since the moral worth is determined solely by its usefulness with an action summed among all beings, this topic should be regarded with care in the extent that as an important prerequisite for creating a good life among all the users, it becomes important for users, as an ethical norm, to carefully evaluate and apply information gained via technological tool as they use this information to make judgements and decisions (Work, 2020). Apart from that, the credibility of shared information is important to ensure that all the users can benefit equally, and equal benefit is necessary to achieve broad social good. The technological use with the interactions can be challenging if carelessness towards the knowledge understanding in the attempt to accomplish technologies with misuse basis apart from the main goal of its function. In the information basis, it can cause confusion and even conflict if users spread information which is not true. Moreover, hostility arises among groups as a result of information (Zhang, 2019). As a result, there can be dangerous consequences when there is no way for users to discriminate among news, fact, prejudgment, and gossip through both face-to-face interactions and interactions in providing professional and ethical based instructional suggestion. These ideas are relevant to how people engage in friendships online (Alatalu, 2020). The connections between technology and human capabilities can be complex, depending on both the details of technology design and the features of the application context.

Referring to the engaged types of the products of engineering design, attempts to understand the relation between technological products and social impacts in terms of systems, devices, and procedures have an entire essence to determine such a scenario to generate certain social consequences (Zegzhda et al., 2020). Covered into the methods developed by engineers and used in a particular social context, the technological neutrality and technological determinism both of them have a certain tendency to determine the impact which can lead to cause in terms of utility and risk to the society. Especially in the digital age, the ethical involvement should be considered in particular way so that the users can understand to apply it. In terms of ethical norms which shall be used in delivering service for instance, it is important to the attainment of a good life to contribute to this goal. It has to be careful in governing good ethical foundation especially in disseminating information (Lykou et al., 2019). Information sharing can make our life easier for example to build relationship with one another, to create a business contacts, and to seek updated news from social media. In particular, technology adoption-derived information can be useful in terms of personal and social orientation.

CONCLUSION

The wide range of an online interaction has been a new normal where the individuals can have a simultaneous information share in a borderless and timeless base. Along with such positive feedback achieved from the online use, there are several challenges leading to the cyber conflict obviously seen such as scammers, cyberbullying. This article aims to investigate the professional and ethical negotiation for cyber conflict prevention towards misuse and exploitation of massive social media adoption from the higher learners' perspective. The empirical finding revealed the principal value of digital professional skills enhancement in online practice consisting of digital competence skills, digital practice adaptability and stability, and digital technical application skills. The digital ethical responsibility in online practice included communication and information accuracy enhancement, digital manner adaptability and transparency, accountability and security. In this article, we have summarized a profound discussions related to digital practice with transforming technical requirements and specifications. We propose a dynamic discussion that encompasses enhancing ethical commitment on information accuracy for cyber conflict management; considering ethical manner on digital manner adaptability for cyber conflict arrangement; strengthening professional skills on transparency and security information quality for cyber conflict arrangement; and empowering professional negotiation accountability for cyber conflict management. In particular, the practical implication for cyber conflict' proper response was discussed in the attempts for preventive action from the beginning stage, where the youth could have a particular attention to manage an online conflict in a proper early stage, require to re-examine the strategic ethical manner and professional skills. The important insight of ethical manner pathway should be governed within the users' process transformed into the featured design for the guideline among the users in online interaction. While, the professional skills could be developed properly in line with the technical enhancement on online practice.

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