

## Security Practices of Higher Education Institutions in Ilocos Norte, Philippines in the Upsurge of Coronavirus

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**Abstract: Security Practices of Higher Education Institutions in Ilocos Norte, Philippines in the Upsurge of Coronavirus.** To analyze the security practices of Higher Education Institutions in the province of Ilocos Norte, Philippines during the surge of the COVID-19 disease is the objective of this study. The researcher used qualitative methodology using action research design through the strengths, weaknesses, opportunities, and threats (SWOT) approach. Study participants were members of security management of three HEIs selected thru purposive sampling. The result of the study showed that the security management of the Institutions guarantees the security of all stakeholders in all areas of security covered in the study by complying with all COVID-19 health and security protocols. However, the upsurge of the COVID-19 pandemic causes dangerous threats to the institutions' areas of security. It can be concluded that the SWOT of Higher Educations Institutions' security practices is diverse on all areas of security. There are challenges that the security management of HEIs encountered during the outbreak of COVID-19.

**Keywords:** security practices, higher education institution, COVID-19 outbreak.

**Abstrak: Praktik Keamanan Institusi Pendidikan Tinggi di Ilocos Norte, Filipina saat Kemunculan Virus Corona.** Untuk menganalisis praktik keamanan Institusi Pendidikan Tinggi di provinsi Ilocos Norte, Filipina selama lonjakan penyakit COVID-19 adalah tujuan dari penelitian ini. Peneliti menggunakan metodologi kualitatif dengan desain penelitian tindakan melalui pendekatan kekuatan, kelemahan, peluang, dan ancaman (SWOT). Peserta studi adalah anggota manajemen keamanan dari tiga PT yang dipilih melalui purposive sampling. Hasil kajian menunjukkan bahwa manajemen keamanan Lembaga menjamin keamanan seluruh pemangku kepentingan di semua bidang keamanan yang tercakup dalam kajian dengan mematuhi semua protokol kesehatan dan keamanan COVID-19. Namun, maraknya pandemi COVID-19 menimbulkan ancaman berbahaya bagi keamanan institusi. Dapat disimpulkan bahwa praktik keamanan SWOT Perguruan Tinggi beragam pada semua bidang keamanan. Ada tantangan yang dihadapi manajemen keamanan PT selama wabah COVID-19.

**Kata kunci:** praktik keamanan, institusi pendidikan tinggi, wabah COVID-19.

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## ■ INTRODUCTION

Safety, security, and prevention in educational institutions are topics that have always been of interest and concern for the educational community. Educational institutions must be safe and secure spaces for students, teachers and non-teaching staff in order to make optimum spaces for learning and working. (Devine & Cohen, 2007).

For the European Network Education and Training in Occupational Safety and Health (ENETOSH), there are two different perspectives concerning the whole-school safety approach. First, the whole-school move is a management approach which includes the whole educational establishment and, second, the whole-school approach position for a paradigm shift: it is no longer just about education promoting security and health, but rather security and health as a means of promoting quality in education. (Brueck, 2017)

COVID 19 or Coronavirus Disease 2019 which was first identified to originate in Wuhan City, Hubei Province, China in December 2019. It is a disease caused by SARS-CoV-2 that can trigger what doctors call a respiratory tract infection (Mohan & Vinod, 2020).

The year 2020 troubled with unprecedented problems that challenged the current global and national socio-political, economic, and educational standpoint. Last December 2019, the first official case of COVID-19, a disease caused by a novel corona virus called SARS-CoV 2, was detected and confirmed in Wuhan City in the Hubei province of China (Hua & Shaw, 2020). Just few months after the first infection, the number of COVID-19 cases outside of China has increased drastically (Bedford, Enria, & Geisecke, 2020).

The sustained risk of global spread prompted the World Health Organization (WHO) to declare the COVID-19 disease as

a pandemic in March 2020 (WHO, 2020). Available data as of April 14, 2020 from the Center for Systems Science and Engineering (CSSE) of the Johns Hopkins University indicate that the virus has infected at least 1,935,646 people from 185 countries or territories, and has killed 120,914 individuals. Of those who have contracted the virus since it started, 464,995 people have recovered.

Across the globe, the spread of novel coronavirus COVID-19 has led to profound changes in social interaction and organization, and the education sector has not been immune (Weeden & Cornwell, 2020). Higher education institutions (HEIs) worldwide have been deeply affected by the Coronavirus Disease 2019 (COVID-19) pandemic and subsequent lockdown measures. HEIs are environments at high risk of COVID-19 dispersion, due to the high number of people sharing the same environment, and complex to protect, because of the multiple functions present (Quattrone, Borghini, Emdin, & Nuti, 2020). The COVID 19 pandemic has suspended the normal routines of colleges and universities across the nation. Campus security departments are no exception. With fewer people on campus, their responsibilities have changed but not lessened. (Rahn, 2020).

In some areas of Mexico, schools had become a battleground, where teachers and students arrived daily fearing that their physical integrity would be affected. For this reason, school security manuals aimed at all educational levels focused on violence and, to a lesser extent, on risk management, such as the prevention of disasters or pandemics, just like the case of H1N1 (González et al., 2021) or, more recently, COVID-19 (Ramos, 2020).

Community transmission shows a specific challenge to higher education institutions and campus life. (Weeden & Cornwell, 2020). The

conceptualization of school security allows for the identification of strategies to organize and manage risks, non-violence, and promote healthy coexistence. The demands of the COVID pandemic are reorganizing to serve the population by seeking new modes and alternatives to guarantee the right to education and to maintain school safety (Salvador & Chavez, 2020).

Sprague and Walker (2021) differentiate between two concept of school security that every educational institution should consider: one involves the general safety and security of the school building and grounds, and two regarding the social environment of the school. Similarly, Xaba (2014) defends that securing the school environment and creating safe conditions involves the maintenance of the school facilities and ensuring that all areas of the school are constantly observed and monitored.

Since the first positive case of COVID-19 in the Philippines in January 30, 2020 the Commission on Higher Education (CHED) has been active and proactive in its response to give guidance and leadership in the sustained provision of higher education to millions of students in the country. As of April 15, 2020, the Commission has released six (6) Advisories for the prevention, control and mitigation of the spread of COVID-19 in Higher Education Institutions (HEIs) in the country. These Advisories were actively disseminated in the agency's official social media accounts and website, as well as communicated to its regional offices (Cuaton G, 2020). Adequate management of comprehensive school security is necessary to mainstream security and safety management processes in all areas of school management, involving all stakeholders of the educational community (Diaz-Vicario, 2017).

Moreover, Ermita (2019) revealed in his study that higher education institutions currently use safety Management Plans in Region IV-A.

Among the 18 identified safety management plans, safety training for employees and students are most frequently used. The safety management practices identified and applicable to higher education institutions were academic laboratory activities, physical plant, disaster preparedness, and environmental hazards.

This research was conducted to analyze the strengths, weaknesses, opportunities and threats of security management of Higher Education Institutions in the province of Ilocos Norte in times of pandemics. Specifically, it aimed to answer the following question: What are the strengths, weaknesses, opportunities and threats of security practices of the higher education institutions in times of the COVID 19 pandemic in terms of personnel security; physical security; and document and information security?

## ■ METHODS

### Design

The paper used a qualitative method using action research design strengths, weaknesses, opportunities, and threats (SWOT) approach. The researcher applied an action research design by collecting data on the strengths, weaknesses, opportunities, and threats of the security practices of the Higher Education Institutions understudy during the upsurge of the corona virus disease through an interview using a semi-structured interview guide. The interview offers the researcher access to the participant's ideas, thoughts, and memories in their own words. Furthermore, observation and ocular inspections were conducted.

### Participants and Study Site

The participants of the study were the members of the security management of three Higher Education Institutions in the province of Ilocos Norte in the Philippines. The study consists

of nine participants purposively selected based on the following criteria: the Head of the Security Services and one Security officer assigned to the Security Department before and during the outbreak of the COVID 19, a representative from the administration in charge of security management. There were nine participants of the study selected thru purposive sampling. The Head of the security service of the HEI and Security personnel participant must be assigned to the Security Department before and during the outbreak of the COVID 19. The representative of the administration must be the one in charge of the security management of the institution. The researcher believes that they are the right people in the best position with the appropriate knowledge to evaluate, determine, and can sufficiently provide the necessary information to achieve the study's objective.

### **Instrumentation and Data Collection**

To gather the needed data in the study in-depth interview was conducted through the use of a semi-structured interview guide to uncover rich descriptive data on the strengths, weaknesses, opportunities and threats of the security management in the higher education institutions involved. It allowed the researcher and the participants to engage in a discussion and explore people's perspectives since the researcher will not strictly follow a formalized list of questions that were developed by the researcher which was approved and validated by a pool of experts in the field. The researcher personally met with the identified participants where they signed the informed consent form to indicate their willingness to be interviewed. The interviews, which were audio taped using the cellular phone audio recorder, were only for those permitted by the participants. Taped interviews were transcribed and coded for analysis.

Several triangulation methods were conducted to establish the reliability and

truthfulness of the data. The researcher together with the participants carried out ocular inspections to confirm the claims during the interview. Furthermore, the researcher conducted observation to validate the answers of the participants.

### **Data Analysis**

The researcher used thematic analysis in identifying, analyzing, and reporting patterns within the data. It is usually applied to a set of texts, such as interview transcripts in a qualitative approach. The researcher closely examines the data to identify common themes – topics, ideas, and patterns of meaning that come up repeatedly. Thematic Analysis (TA) is the method by which data patterns (themes) are identified, analyzed, and reported (Braun and Clarke, 2008). Further, they argued that thematic analysis allows for rich, detailed, and complex descriptions of your data. They explained that TA is the first qualitative analytical approach to be studied by researchers, as it offers core skills that will be useful in performing many other forms of qualitative analysis.

### **Ethical Consideration**

Ethical considerations about this research centered on the requirements of voluntary participation, informed consent, confidentiality and the personal safety of the researcher. Each discussed both ethical norms and the practical steps that were taken during the research process as to their adherence.

## **■ RESULTS AND DISCUSSION**

### **Presentation, Analysis and Interpretation of Data**

#### **Swot Analysis of Personnel Security Strengths of Personnel Security**

The strength of personnel security of the higher education institutions during the pandemic is compliance of health protocol

with the strict implementation of COVID 19 health protocol, checking of identification card, physical distancing, one entry, and exit, and availability of hand wash area.

Strict implementation of COVID 19 health protocol. All of the nine (9) participants revealed that their respective institution is compliant with the health protocols given by the government by strict implementation of COVID 19 health protocols particularly screening all types of clients entering their school campus.

The implementation of the protocol is following the CHED COVID-19 Advisory No.1 dated February 11, 2020. On Screening, all HEI's are encouraged to establish screening protocol based on the WHO guidelines for screening and response. This is evident in the responses of the participants wherein checking of body temperature, wearing of face mask and face shield are being implemented to all entering the higher education institutions to ensure the protection and security of stakeholders in this time of pandemic.

Participant 1 stated, "We implement the basic screening protocols based on the minimum health standard against COVID 19." The study of Girum et al. (2020), concluded that quarantine, contact tracing, screening, and isolation are merged it is an effective measure of COVID-19 prevention. Similarly, Ocampo and Yamagishi, (2020) found out that compliance with minimum public health standards is the most significant protocol for such strategy against COVID 19.

Observation made by the researcher confirmed that the Higher Education Institutions enforced strict implementation of the COVID 19 health protocols. The security management implemented the no face shield no entry policy to all types of school clients. Further, checking of Identification Cards were done to all clients entering their institutions as part of their security protocol during this pandemic while

at the same time implementing the minimum health standards.

Participants 1, 2 and 3 stressed out that in their school checking of Identification Card for employees and students is digitized through the use of Radio Frequency Identification (RFID) and manual checking of Identification card for visitors. The use of the RFID for the said HEI serves as a great help this time of pandemic for it facilitates less contact on the screening process. It is also a great assistance for contact tracing purposes. Ho et al. (2020) mentioned in their study, that RFID provides health care workers movements; this capability is useful contact for tracing during an infectious disease outbreak.

*Social or Physical Distancing.* Participants 3 and 4 disclosed that they are implementing social distancing and keep on reminding individuals in a group to maintain their physical distance of one to two meters. The adherence to social distancing helps limit the opportunities to have contact with infected with the coronavirus disease. Observation made by the researcher confirmed that the security management enforced the social or physical distancing rule in the higher education institutions. Dr. Beverly Ho, Director IV of Health Promotion Bureau in the DOH's Public Health Services Team aforementioned observance of physical distancing by one meter can reduce the chance of transmission by 82% with protection increasing as the distance is lengthened (DOH, 2020). Similarly, Islam et al. (2020) in their study concluded that physical distancing interventions were associated with reductions in the incidence of COVID-19.

*Separate Entry and Exit.* Four of the nine participants disclosed that there are only one entrance and one exit provided for clients entering the school campus. They mentioned that there are a separate one entrance and one exit in their respective institutions to control

and monitor the movements of school clients.

The provision of one entrance and one exit in an institution is a great help to control of movement for ingress and egress. All of the higher education institutions in the study have a separate entrance and exit. The locations of the entrance and exit areas are strategically located in an area that guarantees the smooth flow of traffic. Likewise, Ingrassia et al. (2020) recommended that the points of entry to a facility should be different from the exit points so that people inside follow a one-way route and avoid crossing paths. To validate their responses, these areas were shown to the researcher by the study participants during the ocular inspection after the interview.

*Hand Wash Area.* Two participants mentioned that a hand wash area was available at the entrance of their respective institutions. The availability of hand wash areas in an institution is important during the time of the pandemic. The availability of hand wash areas is noticeable upon entry that are being utilized by all clients as shown by the participants after the interview.

This supports the health practice that hand washing is said to be a simple and effective measure that an individual can perform to help prevent the spread of diseases. World Health Organization (2020) stated that the hand has a crucial role in the transmission of COVID19. Corona virus disease mainly spread through droplet and contact transmission. Hand hygiene is one of the most effective actions to reduce the spread of the virus and infection due to COVID 19. Similarly, Bazaid et al. (2020) concluded that adherence of the public to the advised personal protective measures by the WHO, including hand hygiene just like hand washing, is crucial to control the COVID-19 pandemic.

### **Weaknesses of Personnel Security**

The weaknesses of personnel security during the pandemic of the HEIs under study

are lack of security personnel, crowd management, and one-lane entry.

*Lack of Security Personnel.* Five participants of the study mentioned it as one of the weaknesses of personnel security of the higher education institution during the time of the pandemic. Apparently, the size of the institution demands the number of security personnel needed. This means that the number of guards in an institution should be based on the size of the school campus given the nature of the work of the security guards. At the time of the pandemic, the correct number of security personnel will ensure the full and proper implementation of all health protocols. It concurs with the findings of Segev (2017), wherein his research findings revealed a correlation between the presence of more guards and students' sense of safety. Similarly, IFSEC Global(2020) stated that many stores hired extra security personnel to ensure that the patrons at their stores were protected.

However, these times of pandemic work arrangement reduce number of the workforce, skeletal workforce, work from home, and other work arrangements following the CHED guidelines. For these reasons, there is only a limited number of school clients. Therefore, it is not feasible to hire or recruit additional guards.

*Crowd Management.* Three participants stated that accommodation of a large group of individuals at the screening areas is the weakness of the personnel security this time of pandemic due to the implementation of physical distancing. The stay-at home protocol is applicable only for students who attend classes online. However, there are some instances wherein students need their physical presence in school just like enrolment, because there are things that need to be settled personally.

On the observation made by the researcher, crowd management is a problem

at one of the HEIs where the location of the entrance is near a busy road. Chen et al. (2020) found that mass gathering event was associated with aggravating the spread of viral respiratory infectious diseases.

*One Lane Entry.* The participants stated that although there is only one entry on the campus there must be a separate lane intended only for employees and a separate lane intended only for students. The provision of one entrance for establishments is one of the measures issued by the government. All three HEIs are compliant with this measure. Two participants of the study agree that there should be only one entrance but stated further that there should be a separate lane at that entrance intended for employees. The problem of one lane for all clients entering the school campus is for employees their work is affected. Similarly, in the study of Abdul Nasir et al. (2020), they found out that the inefficient design of user access to buildings and misplace locations of multiple entries and exit in indefinite directions of users can impose slight limitations of social distancing.

### **Opportunities for Personnel Security**

The three major themes that served as the opportunities for personnel security are Enhance Security Protocols, Strict Screening of Entry, and Accessibility of Online Appointment.

*Enhance Security Protocols.* Six participants stated that during the COVID 19 pandemic they enhance the usual security practices. The health protocols are now integrated into their regular security practices due to COVID.

The outbreak of coronavirus disease serves as a challenge to all. To the security management of HEIs, this is an opportunity to revisit existing security practices if it is still applicable to the present issues of the pandemic. The traditional security practice remains, however additional check due to the pandemic is needed. This

includes checking of body temperature, wearing face mask and face shield properly.

Validation by the researcher revealed that traditional security protocols implemented were observed to have improved and changed following health protocols issued by the government. The guards were at a reasonable safe distance while doing the necessary security check incorporating all minimum health protocols just like wearing of face mask and face shield, checking body temperature, and filling up contact tracing form.

*Strict Screening of Entry.* Participants stated that the COVID 19 pandemic serves as an opportunity for their respective institutions to implement stricter screening. Participant 3 said, "We are now stricter because of the pandemic by implementing the safety protocols against COVID 19." The usual screening procedure needs to be stricter this time of the pandemic. All people who want to gain entry to the school must be compliant with minimum health protocol. It will guarantee optimum safety and security of all inside the campus against the deadly virus. Observation made by the researcher revealed the strict screening of entry to all clients by the security management. Strict implementation of no face mask and face shields no entry policy is enforced.

*Accessibility of online appointments.* The use of technology this time of COVID-19 pandemic is an advantage and great help to make the transaction simple, faster, and safer. It can limit face-to-face contact to prevent possible transmission of infection.

The online system can control the number of students entering the campus. They can set the maximum limit of students allowed on a particular date through online appointment. The finding is corroborated by the study of Zhang et al. (2012) stated that the Internet has emerged as another means to make appointments. Likewise, Zhao et al. (2017)

concluded that web-based appointment scheduling has many advantages during the pandemic.

### **Threats on Personnel Security**

The threats on personnel security during the pandemic are Infection of COVID 19, arrogant clients and limited work duty

*Infection of COVID 19.* This theme is the most prevalent threat of the pandemic to personnel security. All nine participants stated that infection of COVID 19 virus is what they consider as the main threat.

Participant 4 mentioned, “The uncontrolled situation wherein we do not know if employee or client is infected of COVID, the possibility of clients infected is still there despite the tight health security measures.” It is hard to tell who among the people they are dealing with is infected. Research by Pulaganti (2021) revealed that the Covid-19 pandemic created fear of infection for everyone because no vaccine was available; no treatment protocol for COVID-19 patients was full proof.

The threat of infection from the COVID-19 virus caused fear and panic to everyone. As of April 15, 2021, the Provincial Government of Ilocos Norte recorded a total number of COVID 19 cases of 1,390 and a total death of 10. The 589 COVID 19 cases out of the cases of the province are residents of Laoag City Ilocos Norte. Two (2) out of the ten (10) recorded deaths are also from the city (PGIN, 2021). The record shows that infection of the coronavirus is a threat to the place.

*Arrogant Clients.* Three participants revealed that dealing with the arrogant client was a threat to personnel security. According to participants, they encountered this problem whenever clients are reluctant to undergo to strict screening protocol. Just like the implementation of the “No Face Shield No Entry” protocol.

The behavior of some who cannot comprehend the importance of such protocol takes it against the implementer. Observation made by the researcher confirmed it. At the entrance, some clients would insist to enter disregarding the usage of a face shield. According to them, it will only be for a short time visit. However, ingress of such clients was not allowed by the security management. Shpeizer, (2021) found out in his study that Israeli school security guards are always on the threshold between being needed yet disrespected.

*Limited work duty.* This theme was founded on the responses of two participants. They stated that the threat of COVID is in limits work. COVID positive cases cause lockdown. It leads to employees not reporting to work and security personnel no to report for duty. To support this finding, Participant 3 said, “The effect of COVID 19 is on security personnel if they are coming from areas that is under lock down due to increasing positive cases, our duty is also affected.” This statement shows the impact of the pandemic on to workforce and employees of institutions. Vyas and Buthakieo (2020) mentioned in their research that COVID-19 rendered a large proportion of the workforce unable to report to work.

### **Swot Analysis Of Physical Security**

#### **Strengths of Physical Security**

The strength of physical security of the higher education institution understudy during the pandemic is the conduct of roving patrol, electricity and water check, high guard visibility, and sanitation and disinfection.

*Conduct of Roving Patrol.* It is the most prevailing theme as strength of physical security. All participants revealed that security personnel conduct routine roving patrol within the perimeter of the campus and to buildings.

Participant 1 said, "After work security guards make the routinary check around the campus and buildings." The protection of school properties, just like buildings and facilities are of the same importance this time of the pandemic. The statement shows the importance of building security with or without a pandemic.

The claimed of the participants during the interviews was validated through the observation made by the researcher. Observations revealed that the security guards conduct routine patrol inside the campus. Xaba (2014) defends that securing the school environment and creating safe conditions involves ensuring that all areas of the school are observed and monitored. The availability of security guards conducting roving patrol was observable inside the school campus. They were spotted roaming around doing their duties.

*Electricity and Water Check.* Five participants mentioned that the security personnel check for the electricity just like lights and other appliances left turn on together with water in the building just like faucets. Electricity and water were checked after all employees have left the campus.

Electricity and water system checked on comfort rooms and offices were one way of maintaining security inside the school campus. These could prevent untoward incidents, just like destructive fire. Strom et al. (2010) noted that in the United States, private security guards perform various functions that include patrol duties, examining locks, and checking for fire hazards.

*Sanitation and Disinfection.* Five participants stressed out that the security management conducts sanitation and disinfection. Security guards sanitized buildings and areas where people usually converge after office hours when all employees left the building or campus.

Sanitation and disinfection to areas inside the school where people usually do business were of great importance. It helps prevent the possible transmission by mere touching of surfaces contaminated. Similarly, the study of Roy and Basu et al. (2020) found a strong positive correlation between lesser effects of Covid19 and sanitation throughout the time of the COVID pandemic.

The researcher witnessed during the conduct of observation how the HEIs conduct disinfection at the entrance. Spraying alcohol and disinfectant was done to chairs, pens, and visitor's passes. Security guards and other designated employees disinfect in areas where people usually gather. COVID 19 CHED Advisory No. 1, dated February 11, 2020, recommends preventive actions to avoid being exposed to the virus and prevent its spread through cleaning and disinfecting frequently touched objects and surfaces using a regular household cleaning spray or wipe.

*High Guard Visibility.* Five participants mentioned that security guards were designated in strategic areas of the campus for easy assistance as the need arises, just like buildings and parking areas. Similarly, Johnson (2020) stated that students, faculty, and staff rely on their campus public safety personnel to minimize their fears and provide reassurance through response to their immediate needs, rapid problem-solving, and a high-visibility presence.

Observation by the researcher affirmed the statements made by the participants that security guards were available and visible at strategic areas of the campus on all the HEI in the study

### **Weaknesses of Physical Security**

The weaknesses of the Higher Education Institution Physical security during the pandemic are the lack of security personnel and weak perimeter fence.

*Lack of Security Personnel.* Five participants mentioned that there is a need for additional security guards.

Participant 8 said, "Additional guard is needed, there should be a separate guard at the gate and those on roving especially this time of COVID." Similarly, Maynard (2017) stated that the future school safety plans would include a permanent resource officer presence on campus and additional staff to monitor the school building safety.

However, the hiring of additional security guards this time of pandemic is not practical to HEI's considering the economic impact of the pandemic. The possibility of coming up with an alternative solution that will aid the existing security guards may be considered.

*Weak Perimeter Fence.* Four participants revealed that some part of the perimeter fences needs reinforcement by adding barb wire on top to further cause delay to potential intruders.

The possibility of gaining entry or exiting the school compound other than the specified entrance or exit area can be a security issue. To address this issue, improving perimeter security, just like reinforcing the perimeter barrier. It will also ensure the safety of the protected area and can cause delays to potential intruders and a greater possibility to catch them.

To verify the statements of one participant from one of the HEI, he showed part of the fence that needs reinforcement. It corroborates by Maynard (2017) found in his study that delaying perpetrator entry to schools would allow responders to arrive to minimize the disaster.

### **Opportunities on Physical Security**

The pandemic provides an opportunity in terms of physical security for the HEIs to make necessary repairs and rehabilitation of buildings and facilities and ample time to conduct a security check.

*Repair and Rehabilitation of Building and facilities.* All participants stated that the time of the pandemic was a considerable opportunity for their institutions to make repairs on buildings and fences faster due to limited number of clients.

Participant 4 said, "The things that need to repair are an advantage this time of pandemic because there are no students." The time of the pandemic was a great opportunity that the HEIs can take advantage in terms of infrastructure repairs and rehabilitation for the very reason that there are no face-to-face classes and there is only a limited number of people inside the campus. Similarly, Xaba (2014) defends that securing the school environment and creating safe conditions involved school facility maintenance.

To validate the findings, an observation conducted showed proof of repair and restoration on buildings and facilities to the HEIs were noticeable. Furthermore, an ocular inspection confirmed repairs of facilities. There was one HEIs that is replacing floor tiles and repainting of walls. Thus, the pandemic gives the institutions time of building repair and rehabilitation easy and fast to make the facilities safe for all.

*More Time for Security Check.* Two participants revealed that this time of pandemic provide more time to conduct a security check. Buildings, comfort rooms, and other facilities were checked properly. Before, due to a large number of people on the campus, they were focused on the movement of people.

The limited number of school clients paved the way for campus security personnel more time to perform security checks on school buildings and facilities. Unlike before the pandemic, they are more focused on monitoring the movement of school clients. Sprague and Walker (2021) mentioned that every educational institution

should consider the security of the school building and grounds. The fewer people on campus, security personnel responsibilities have changed but not lessened. Campus security leaders must also consider the health threats posed to their staff make assignments to monitor the unfolding pandemic (Rahn, 2020).

### **Threats on Physical Security**

The threat to physical security this time of pandemic is the coronavirus infection. The sub-themes spread of infection among employees and infection of COVID 19 to security personnel because when people were infected, their work is affected.

*Spread of infection among employees.* Six participants were worried about the possibility of viral infection from security personnel among the employees. It is due to the nature of the work of security guards. Just like the roving duty and those assigned on the entrance in charge of the screening procedure where all employees are in contact every time, they enter the campus.

One big problem about this COVID-19 pandemic is the reality that no one can tell who the carrier of the deadly virus is. This implies that the spread and transmission rate of the disease from one person to another is high. Gupta and Karia (2020) mentioned in their paper that studies have found that asymptomatic patients can play a vital role in spreading the virus.

*Infection of COVID 19 to Security personnel.* Five participants stated that the threat of the pandemic is the possibility of infection of COVID virus to security personnel since it is not easy to identify who is the courier of the virus.

Participant 3 stated that, “the possible contact to COVID positive individuals is a big possibility this means anytime we can get infected.” Burdorf et al. (2021) found out in their

study that COVID-19-related mortality was highest among men in the lowest skilled occupations, with security guards among the profession with the highest death rate. Similarly, Johnson (2020) mentioned that a campus security officer exposed to COVID-19 will come into contact with possibly lots of people by the end of their shift. It makes a campus security officer may be both first responder and first transmitter. The nature of the work of security personnel made them vulnerable to coronavirus infection.

### **Swot Analysis of Document and Information Security**

#### **Strengths of Document and information Security**

The theme of the strength of document and information security during the pandemic is the utilization of technology. The three sub-themes of the theme are Technology-based school transaction; Online based Information Dissemination, and Student Electronic Document Management.

*Technology-Based School Transaction.* The participants stated that the use of technology via online platforms facilitates student school transactions during the upsurge of the COVID-19 pandemic. Online systems of transactions ensure student’s safety this time of the pandemic. They can enroll, pay their tuition fees and facilitate other school transactions online.

Participant 4 stated, “We use online for student transactions just like enrolment.” The protocols for the COVID-19 pandemic leads to the limited movement of individuals. Everybody is encouraged to stay at home and minimized travel unless it is essential. These shifted to access transactions using online technologies. Shah (2021) mentioned that education is another domain in which there was a dramatic shift to the online mode of a

transaction during the coronavirus pandemic.

The traditional scheme of settling school obligations switches to online money transfer. It helps minimize the movement of individuals outside their homes. Likewise, in the study of Gabriel et al. (2021), they mentioned that educational institutions now deliver their services and receive payments via online. Similarly, Mansour (2021) found out that countries had significantly responded to the surged need for digital means of settlement during the pandemic.

*On-line-based Information Dissemination.* Five participants mentioned that information dissemination is on line based through the utilization of online platforms just like Facebook. Participant 2 said, “Students and parents are informed regarding school announcements via social media just like facebook.”

The role of social media in disseminating information in this time of the pandemic is vital. Announcements and information are now being facilitated fast with the advent of online technology and social media platforms just like posting on Facebook or in Group Chats. Information or announcements can be sent in just a blink of an eye as well as the response can be done easy and fast.

To affirm the answers of one participant during the interview presented to the researcher the availability of different Messenger Group Chats he was included. Using online social media platforms to disseminate information has been the fastest means to inform the public. In like manner, Wong et al. (2020) found out that during the COVID-19 pandemic, social media use has accelerated. Likewise, Hamzat and Otulugbu (2020) found that varying social media platforms are used in disseminating information.

*Student Electronic Document Management.* It emerged from the response of four participants of the study. Participants

8 stated, “We are now using SIAS, all they need to do is register and create their account, they need not come to school. They can see their grades and tuition fee balance.”

These statements show an electronic document management system for student school records is convenient and practical this time of the pandemic. Similarly, Ab Aziz et al. (2019) mentioned that an electronic document and record management system is perceived to benefit records management and documents in organizations. It also allows students to access their student record anywhere and helps to minimize the movement of people.

One participant demonstrated how to navigate the system presented the various features to include; online enrolment, checking school fees and remaining balance, checking class standing or grades. It is in concurrence with the study of Estrera (2017), who concluded that the Electronic Document Management System for the case of Capitol University proved to be beneficial and practical.

### **Weaknesses of Document and Information Security**

The weakness of the document and information security of the HEIs understudy is handling documents. The sub-themes are Manual Safekeeping of Documents and Not Secured Storage room.

*Manual Safekeeping of Documents.* Two participants revealed that most of the documents in their institution were on manual safekeeping.

Participant 2 said, “In my observation, there is a need for back up of files in soft copy because most of our documents are in hard copy.” These statements show the predicaments that manual safekeeping of documents. The fear of the possible destruction of a document is present in manual safekeeping just like in cases of calamities or fire incidents if the hard copy of a file is

destroyed because there is no digital backup. Similarly, Netshakhuma (2020) revealed the university and research institution archives lack digitization preservation strategies. Most of their records are not accessible online, as most of their collections are still preserved manually through the paper-based system.

Access to manually safekeep documents is a concern this time of pandemic. Documents that are digitally stored when needed can be accessed by more than one user anywhere and anytime. Iziomo (2014) as cited by Freda (2014) identified that electronic records management gives unlimited storage space as compared to the conventional method of office cataloging.

*Not Secured Storage Room.* The storage room of one of the HEIs in the study was not secured as claimed by Participant 5. The storage room for paper records located on the ground floor is prone to flooding during rainy seasons.

Participant 7 also mentioned, "File Room, it is needed since the student records are ballooning considering the increasing no of the enrollee, a file room will be fire-resistant." These statements show the need for a secure place for the storage of school documents. Considering the importance of hard copies of school records, the availability of a safe and secured storage facility is of importance. A storage room or facility must meet document security requirements such as being fire-resistant. It is crucial for a school that has a large student population. It needs to keep student records to maintain confidentiality and for future reference or use. These findings corroborate by Nwaomah (2017) that there are insufficient cabinets and storage rooms or space for filing students' academic documents. It slows down the retrieval of students' records information. Furthermore, he recommended additional storage facilities- records center/archives the storage of non-current records to help to

decongest the current storage room in the registry and serve as a backup in emergency or disaster.

### **Opportunities on Document and Information Security**

The opportunity brought by the pandemic in terms of the document and information security of the Higher Education Institutions is paperless document and information as the theme. The sub-themes are Improvement of Online School Transactions; Less Paper Communication and Digitize back up of Documents.

*Improvement of online school transactions.* Six participants mentioned, that the use of online technology in school transactions is prevalent thereby needs improvement of the system.

Participant 8 mentioned, "This time of pandemic, we are making transactions more convenient through technology and we keep improving and upgrading our system."

These statements show that due to the advent of technology on school transactions, there is still a need to improve and upgrade the systems. Online school transaction is dependent of technology. Therefore, continuous upgrading and innovation are necessary from time to time. It will ensure a smooth transaction among school clients. Similarly, Wangila (2021) mentioned that the continuum of cyber security in the face of the COVID-19 epidemic has become a complex affair as organizations take radical measures to incorporate system upgrade to allow workers to operate from home.

*Less paper communication.* The imposition of lockdown resulted from work-from-home arrangements. It leads the higher education institutions in shifting the medium of communication via an online system disseminating information. Three participants stated that during the COVID-19, they switch

their communication among employees through emails and posting in their Group Chats for announcements, communication letters, and memos.

Participant 5 stated, "To minimize the usage of paper, communications letters or memos are facilitated through our respective Group Chat."

These statements imply that communication is accomplished during pandemic lockdown without using paper to disseminate information. It facilitated using online technologies to lessen personal contact from one person to another. Less contact from one person to another reduces the possibility of coronavirus infection or transmission. The threat of coronavirus infection is in terms of handling documents from one person to another. Chin et al. (2020) on their paper reported that the coronavirus was inactivated three hours after being laid in the paper. The use of digital communication can be of replacement to regular paper-based communication that can have a safer benefit.

*Digitize backup of documents.* The accessibility of vital records is a challenge during the outbreak of coronavirus disease due to the regulated movement of people outside the home. It prompted HEIs to develop a system of digitizing records. To facilitate easier access and to have a backup. Two participants in the study (Participants 1 & 2) mentioned that their institution is now in the process of the possible development of digitizing school records.

Participant 1 stated, "We are looking at the possibility of digitizing records." Participant 2 also added, "The making computerized back up of important school documents is already on the pipeline."

Digitized backup of essential documents gives many benefits. Among these benefits is easy accessibility without them leaving their house and multiple access to digitally backup documents is made possible.

These findings are corroborated by Iivari, et al. (2020) they have mentioned COVID-19 pandemic has abruptly forced schools to engage in digital transformation. Likewise, Netshakhuma (2020) recommended that universities develop preservation strategies to migrate records from the paper-based system to the electronic records management system.

### **Threats on Document and Information Security**

The patterns that emerged are shown in three major themes, Infection of Personnel; Unstable Internet Connectivity and Hacking of School Online System.

*Infection of Personnel.* Three participants stated that the pandemic is a threat in the document and information security. One of the participants stated that if the personnel get infected with COVID-19, the file management is affected. After all, personnel are in charge.

Participant 1 said during the interview, "I think it is on the personnel, if the personnel is affected by COVID the file management is also being affected." This statement shows the implication of the COVID 19 infection pandemic to all aspects of work. This is corroborated by Hamid et al. (2020) COVID-19, which has a significant negative impact on employee performance.

*Unstable Internet Connectivity.* Three participant's worry is on the unstable internet connectivity due to the number of people who are internet dependent.

Participant 8 added, "almost all people rely on online transactions problem is the unstable internet signal." The availability of a strong internet connection is very significant during times of pandemic wherein almost all transactions are dependent on online technology. This finding concurred in the

article of ISOC, (2022) where it stated that when the productivity of people depends significantly on the internet, its poor internet connectivity.

*Hacking of School Online System.* Three participants mentioned that since schools shifted to the online system of transaction schemes, it is a potential target of a hacker. School's online systems can be the target of online attacks, just like identity theft.

Participant 7 stated, "Since the school shifted to an online scheme of a transaction the school's system can be a target of hackers. Software attacks, Identity theft, password attacks, and the like." Similarly, Agarwal et al. (2017), stated that along with the surge in the use of online technologies is a rise in online fraud, scams, intrusions, and security breaches. The pandemic has created a scenario.

## ■ CONCLUSIONS

The COVID 19 pandemic has brought about changes in the community most specially the educational institutions. The study was able to identify Strengths, Weaknesses and Opportunities along the areas of Personnel Security, Physical Security, and Document and Information Security.

The study showed that the security management of the institutions guarantees the security of all stakeholders in all areas by complying with all COVID-19 health and security protocols. However, the upsurge of the COVID-19 pandemic causes dangerous threats to the institutions' areas of security. Further, there are various challenges that the security of HEIs have encountered during the outbreak of COVID-19. Conversely, the pandemic has also brought opportunities for the institution to improve its services to their clients. Therefore, the SWOT of HEIs security practices is diverse and helpful to determine

the plans of the security management to address the risk brought by the COVID-19 pandemic without compromising quality education.

## ■ REFERENCES

- Ab Aziz, A., Yusof, Z. M., & Mokhtar, U. A. (2019). Electronic document and records management system (EDRMS) adoption in public sector – Instrument's content validation using content validation ratio (CVR). *Journal of Physics: Conference Series*, 1196, 012057. doi:10.1088/1742-6596/1196/1/012057
- Abdul Nasir, N. A., Hassan, A. S., Khozaei, F., & Abdul Nasir, M. H. (2020). Investigation of spatial configuration management on social distancing of recreational clubhouse for COVID-19 in Penang, Malaysia. *International Journal of Building Pathology and Adaptation*, 39(5), 782-810. doi:10.1108/ijbpa-08-2020-0072
- Agarwal, S., Sengupta, D., Kulshrestha, A., Anand, A., & Guha. (2017, May 2). Internet users to touch 420 million by June 2017: IAMAI report. Retrieved from <https://economictimes.indiatimes.com/tech/internet/420-million-to-access-internet-on-mobile-in-india-by-june-iamai/articleshow/58475622.cms>
- Bazaid, A. S., Aldarhami, A., Binsaleh, N. K., Sherwani, S., & Althomali, O. W. (2020). Knowledge and practice of personal protective measures during the COVID-19 pandemic: A cross-sectional study in Saudi Arabia. *PLOS ONE*, 15(12), e0243695. doi:10.1371/journal.pone.0243695
- Bedford, J., Enria, D., Giesecke, J., Heymann, D. L., Ihekweazu, C., Kobinger, G., ... Wieler, L. H. (2020). COVID-19: Towards controlling of a

- pandemic. *The Lancet*, 395(10229), 1015-1018. doi:10.1016/s0140-6736(20)30673-5
- Braun, V., & Clarke, V. (2008, July 21). Using thematic analysis in psychology. Retrieved from <https://www.tandfonline.com/doi/abs/10.1191/1478088706qp063oa>
- Brucek, C. (2017). A whole-school approach to OSH education. Retrieved from [https://oshwiki.eu/wiki/A\\_whole-school\\_approach\\_to\\_OSH\\_education](https://oshwiki.eu/wiki/A_whole-school_approach_to_OSH_education)
- Burdorf, A., Porru, F., & Rugulies, R. (2021). The COVID-19 pandemic: One year later – an occupational perspective. *Scandinavian Journal of Work, Environment & Health*, 47(4), 245-247. doi:10.5271/sjweh.3956
- Chen, Q., Toorop, M. M., De Boer, M. G., Rosendaal, F. R., & Lijfering, W. M. (2020). Why crowding matters in the time of COVID-19 pandemic? - a lesson from the Carnival effect on the 2017/2018 influenza epidemic in The Netherlands. *BMC Public Health*, 20(1). doi:10.1186/s12889-020-09612-6
- Chin, A. W., Chu, J. T., Perera, M. R., Hui, K. P., Yen, H., Chan, M. C., ... Poon, L. L. (2020). Stability of SARS-Cov-2 in different environmental conditions. doi:10.1101/2020.03.15.20036673
- Commission on Higher Education. (2020). CHED COVID-19 Advisory No. 1. Retrieved from <https://ched.gov.ph/wp-content/uploads/CHED-COVID-2019-Advisory-No.-1>
- Cuatón, G. (2020). Philippines higher education institutions in the time of COVID-19 pandemic. *Revista Romaneasca pentru Educatie Multidimensionala*, 12(1Sup2), 61-70. doi:10.18662/rrem/12.1sup2/247
- Department of Health. (2020, July 10). DOH: Wearing Masks May Cut Transmission Rate By 85%. Retrieved from <https://doh.gov.ph/press-release/DOH-WEARING-MASKS-MAY-CUT-TRANSMISSION-RATE-BY-85>
- Devine, J., & Cohen, J. (2007). *Making your school safe: Strategies to protect children and promote learning*.
- Diaz-Vicario, A. (2017). Practices that promote comprehensive school safety. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 3(1), 304-312. doi:10.18844/gjhss.v3i1.1779
- Ermita, P. (2019). Managing safety in higher education institutions: A case in the Philippines. *International Journal of Recent Technology and Engineering*, 8(2S11), 2805-2814. doi:10.35940/ijrte.b1346.0982s1119
- Estrera, P. J. (2017). Electronic Document Management System for Higher Education Institution. Retrieved from <https://ijisrt.com/wp-content/uploads/2017/06/Electronic-Document-Management-System-for-Higher-Education-Institution-1>
- Freda, A. (2014). Assessment of Records Management Practices Among the Administrative Staff of University of Education, Winneba – Kumasi (Uew-k) And Mampong (Uew-m) Campuses. Retrieved from <https://129.122.16.11/bitstream/123456789/7540/1/Adu%20Freda>
- Gabriel, A. J., Darwsih, A., & Hassanien, A. E. (2021). Cyber security in the age of COVID-19. *Digital Transformation and Emerging Technologies for Fighting COVID-19 Pandemic: Innovative Approaches*,

- 275-295. doi: 10.1007/978-3-030-63307-3\_18
- Girum, T., Lentiro, K., Geremew, M., Migora, B., & Shewamare, S. (2020). Global strategies and effectiveness for COVID-19 prevention through contact tracing, screening, quarantine, and isolation: A systematic review. *Tropical Medicine and Health, 48*(1). doi:10.1186/s41182-020-00285-w
- González Jorge, H., González de Santos, L. M., Fariñas Álvarez, N., Martínez Sánchez, J., & Navarro Medina, F. (2021). Operational study of drone spraying application for the disinfection of surfaces against the COVID-19 pandemic. *Drones, 5*(1), 18. doi:10.3390/drones5010018
- Gupta, I., & Karia, R. (2020, July). Asymptomatic COVID-19: An Additional Challenge. National Journal of Medical and Allied Sciences. Retrieved from [https://www.researchgate.net/publication/343135711\\_Asymptomatic\\_COVID-19\\_An\\_Additional\\_Challenge](https://www.researchgate.net/publication/343135711_Asymptomatic_COVID-19_An_Additional_Challenge)
- Hamid, M., Wahab, S. A., Hosna, A. U., Hasanat, M. W., & Kamruzzaman, M. (2020). Impact of coronavirus (COVID-19) and employees' reaction to changes on employee performance of Bangladesh. *The International Journal of Business & Management, 8*(8). doi:10.24940/theijbm/2020/v8/i8/bm2008-013
- Hamzat, S., & Otulugbu, D. (2020, September 1). Social Media Use and the Challenges of Information Dissemination during Emergencies: Experience of Library and Information Scientists on Covid-19 in Nigeria. Retrieved from <https://scholar.google.com/citations?user=FrEq4EsAAAAJ&hl=en>
- Ho, H. J., Zhang, Z. X., Huang, Z., Aung, A. H., Lim, W., & Chow, A. (2020). Use of a real-time locating system for contact tracing of health care workers during the COVID-19 pandemic at an infectious disease center in Singapore: Validation study. *Journal of Medical Internet Research, 22*(5), e19437. doi:10.2196/19437
- Hua, J., & Shaw, R. (2020). Corona virus (COVID-19) "Infodemic" and emerging issues through a data lens: The case of China. *International Journal of Environmental Research and Public Health, 17*(7), 2309. doi:10.3390/ijerph17072309
- IFSEC Global. (2020, August 25). The role of a security guard during COVID-19. Retrieved from <https://www.ifsecglobal.com/global/the-role-of-a-security-guard-during-covid-19/>
- Iivari, N., Sharma, S., & Ventä-Olkkonen, L. (2020). Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management, 55*, 102183. doi:10.1016/j.ijinfomgt.2020.102183
- Ingrassia, P. L., Capogna, G., Diaz-Navarro, C., Szyld, D., Tomola, S., & Leon-Castelao, E. (2020). COVID-19 crisis, safe reopening of simulation centres and the new normal: Food for thought. *Advances in Simulation, 5*(1). doi:10.1186/s41077-020-00131-3
- Islam, N., Sharp, S. J., Chowell, G., Shabnam, S., Kawachi, I., Lacey, B., ... White, M. (2020). Physical distancing interventions and incidence of coronavirus disease 2019: Natural experiment in 149

- countries. *BMJ*, m2743. doi:10.1136/bmj.m2743
- ISOC (Internet Society). (2022, February 7). Policy brief: Internet shutdowns. Retrieved from <https://www.internetsociety.org/policybriefs/internet-shutdowns/>
- Johnson, O. (2020, December 16). Police and Security Officers Need to Know and Do in Response to the Novel Coronavirus (COVID19). Retrieved from <https://education.jhu.edu/cshs/resources/what-campus-police-and-security-officers-need-to-know-and-do-in-response-to-the-novel-coronavirus-covid-19/o>
- Mansour, H. (2021). How successful countries are in promoting digital transactions during COVID-19. *Journal of Economic Studies*, 49(3), 435-452. doi:10.1108/jes-10-2020-0489
- Maynard, L. B. (2017). School Safety Preparedness: A Case Study of Three School Districts. Retrieved from <https://scholarworks.moreheadstate.edu/>
- Mohan, B., & Vinod, N. (2020). COVID-19: An insight into SARS-cov2 pandemic originated at Wuhan city in Hubei province of China. *Journal of Infectious Diseases and Epidemiology*, 6(4). doi:10.23937/2474-3658/1510146
- Netshakhuma, N. S. (2020). Responsibilities of archivist now and in the future as the result of COVID – 19; Case of ICA-SUV. *Digital Library Perspectives*, 37(1), 39-53. doi:10.1108/dlp-06-2020-0050
- Nwaomah, A. E. (2017). Records information management practices. *International Journal for Innovation Education and Research*, 5(11), 87-102. doi:10.31686/ijier.vol5.iss11.856
- Ocampo, L., & Yamagishi, K. (2020). Modeling the lockdown relaxation protocols of the Philippine government in response to the COVID-19 pandemic: An intuitionistic fuzzy DEMATEL analysis. *Socio-Economic Planning Sciences*, 72, 100911. doi:10.1016/j.seps.2020.100911
- PGIN (Provincial Government of Ilocos Norte). (2021). Ilocos Norte COVID-19 Update April 15, 2021. Retrieved from <https://www.facebook.com/IlocosNorteOfficial/photos/pcb.3922854564469188/3922850901136221/>
- Pulaganti, M. (2021). Reflection of COVID frontline worker based on family's experience with COVID infection. doi:10.31219/osf.io/nsm2u
- Quattrone, F., Borghini, A., Emdin, M., & Nuti, S. (2020). Protecting higher education institutions from COVID-19: Insights from an Italian experience. *Journal of American College Health*, 70(5), 1354-1355. doi:10.1080/07448481.2020.1791885
- Rahn, J. (2020). Adapt to the Daily operations of campus security in the wake of COVID 19. *Campus Security Report*, 17(2), 4-5. doi:10.1002/casr.30659
- Ramos, C. (2020). COVID-19: La nueva enfermedad causada POR UN coronavirus. *Salud Pública de México*, 62(2, Mar-Abr), 225. doi:10.21149/11276
- Roy, A., Basu, A., & Pramanick, K. (2020). Water, sanitation, hygiene and COVID-19 pandemic: A global socioeconomic analysis. doi:10.1101/2020.08.11.20173179
- Salvador, J., & Chavez, V. G. (2020). Conceptual cartography of school safety: School experiences in managing the COVID-19 pandemic in Mexico. *Revista Romaneasca pentru Educatie Multidimensionala*,

- 12(2Sup1), 86-92. doi:10.18662/rrem/12.2sup1/293
- Segev, O. R. (2017). The Contribution of Schools Security Guards to Students' Sense of Safety. Retrieved from <https://education.biu.ac.il/sites/education/files/shared/segevor.pdf>
- Shah, D. (2021, January 30). MOOCWatch 23: Pandemic brings MOOCs back in the spotlight. Retrieved from <https://www.classcentral.com/report/moocwatch-23-moocs-back-in-the-spotlight/>
- Shpeizer, R. (2021). On the threshold: The story of school security guards in Israel. *Mediterranean Journal of Social Sciences*, 12(1), 16. doi:10.36941/mjss-2021-0002
- Sprague, J. R., & Walker, H. M. (2021). *Safe and healthy schools: Practical prevention strategies*.
- Strom, K., Berzofsky, M., Shook-Sa, B., Barrick, K., Daye, C., Horstmann, N., & Kinsey, S. (2010, December). Private security industry: A review of the definitions, available data sources, and paths moving forward. Retrieved from <https://www.ojp.gov/ncjrs/virtual-library/abstracts/private-security-industry-review-definitions-available-data-sources>
- Vyas, L., & Butakhieo, N. (2020). The impact of working from home during COVID-19 on work and life domains: An exploratory study on Hong Kong. *Policy Design and Practice*, 1-18. doi:10.1080/25741292.2020.1863560
- Wangila, F. (2020, January 1). Organizational cyber security measures during covid 19 epidemic. Retrieved from [https://www.academia.edu/42767538/ORGANIZATIONAL\\_CYBER\\_SECURITY\\_MEASURES\\_DURING\\_COVID\\_19\\_EPIDEMIC](https://www.academia.edu/42767538/ORGANIZATIONAL_CYBER_SECURITY_MEASURES_DURING_COVID_19_EPIDEMIC)
- Weeden, K. A., & Cornwell, B. (2020). The small world network of college classes: Implications for epidemic spread on a University campus. doi:10.31235/osf.io/n5gw4
- Wong, A., Ho, S., Olusanya, O., Antonini, M. V., & Lyness, D. (2020). The use of social media and online communications in times of pandemic COVID-19. *Journal of the Intensive Care Society*, 22(3), 255-260. doi:10.1177/1751143720966280
- World Health Organization. (2020). WHO Save Lives: Clean Your Hands In The Context Of Covid-19. Retrieved from <https://www.who.int/docs/default-source/coronaviruse/who-hh-community-campaign-finalv3.pdf>
- World Health Organization. (2020). WHO director-general's opening remarks at the media briefing on COVID-19 - 11 March 2020. Retrieved from <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-11-march-2020>
- Xaba, M. I. (2014). A holistic approach to safety and security at schools in South Africa. *Mediterranean Journal of Social Sciences*. doi:10.5901/mjss.2014.v5n20p1580
- Zhang, X., Yu, P., Yan, J., Hu, H., & Goureaia, N. (2012). Patients' perceptions of web self-service applications in primary healthcare.
- Zhao, P., Yoo, I., Lavoie, J., Lavoie, B. J., & Simoes, E. (2017). Web-based medical appointment systems: A systematic review. *Journal of Medical Internet Research*, 19(4), e134. doi:10.2196/jmir.6747